Textile Industries

OCTOBER, 1950

formerly COTTON Textile Industries

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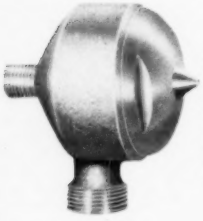
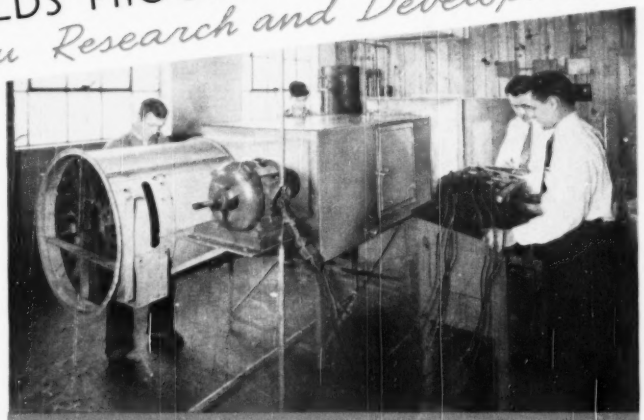
Bahnson BUILDS PROGRESS thru Research and Development

ECONOMY
FLEXIBILITY
EFFICIENCY



ESC ATOMIZER

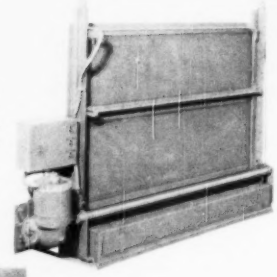
The Bahnson ESC Atomizer provides humidification or supplementary evaporation with a modulating control to vary the evaporative capacity of the Atomizer in direct proportion to the room requirements.



AIR CONDITIONING EQUIPMENT

AUTOMATIC CLEANERS Type S-1

The Bahnson S-1 Cleaner to automatically remove lint from recirculated air screens of unit or central station air conditioning systems.



AUTOMATIC CONTROLS

Bahnson Pneumatic or electric humidity and temperature controls with aspirating cabinets combined with recorders.

MOTORIZED PSYCHROMETER

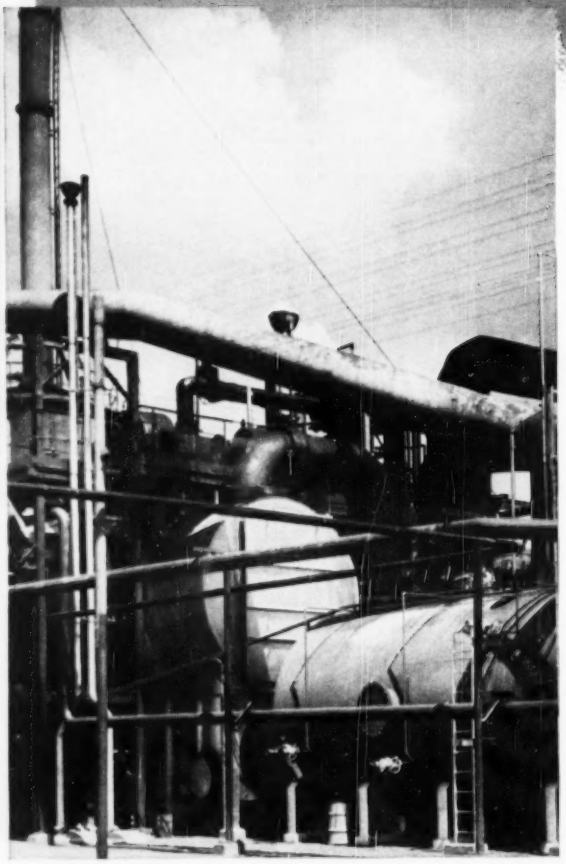
Motorized Psychrometer for accurate and rapid wet and dry bulb temperature readings complete with humidity calculator and record pad holder.

Long practical experience together with pioneering ingenuity, is brought together at Bahnson in the department of research and development . . . a huge department where full size models are "mocked" up for testing – where designers, electrical engineers, air conditioning engineers, idea men, specialists – check, test, redesign, improve, measure and test again all manner of air conditioning equipment.

Here is the heart of progress and development of Bahnson Industrial Air Conditioning Equipment. Here is where facts are found and the final sales data prepared. Here is where the users of Bahnson Installations derive advantages of economy, flexibility and efficiency that are the underlying principles incorporated in all Bahnson Equipment.

Bahnson Company
ENGINEERS AND MANUFACTURERS
WINSTON-SALEM, N. C.

Only MATHIESON produces *all* these 10 basic chemicals



- Sulphuric Acid
- Processed Sulphur
- Soda Ash
- Caustic Soda
- Bicarbonate of Soda
- Ammonia
- Ammonium Sulphate
- Nitrate of Soda
- Chlorine
- Sodium Chlorite

The wide variety of Mathieson products meets the basic chemical demands of American industry—with the benefits of simplified, centralized purchasing, cooperative, economical traffic control, and chemicals of high purity standards. Mathieson Chemical Corporation, Mathieson Building, Baltimore 3, Maryland.

Mathieson CHEMICALS

SERVING INDUSTRY, AGRICULTURE AND PUBLIC HEALTH

TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Executive and Editorial Offices, 806 Peachtree St., Atlanta 3, Ga.
Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879.

Volume 114 Number 10

10 Reasons WHY DRAPER PARTS ARE THE *Best for Your Looms!*

1. UNIFORM CASTINGS
2. THEY CANNOT BE DUPLICATED
3. DRAPER SERVICE IS INCLUDED
4. THEY GIVE PROVEN PERFORMANCE
5. THEY COST LESS THAN SUBSTITUTES
6. THEY GIVE DEPENDABLE PERFORMANCE
7. THE RESULT OF COMBINED EXPERIENCE
8. THEY KEEP YOUR LOOMS AS GOOD AS NEW
9. THEY ARE CUSTOM BUILT FOR YOUR LOOMS
10. THEY GIVE THE BENEFIT OF CONSTANT RESEARCH AND DEVELOPMENT

DRAPER

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S. C.

NO SPOTS TO SPOT

. . . when you lubricate with TEXACO STAZON

You make life easier for your cloth inspectors – and save yourself expense – when you spin and weave with *Texaco Stazon*. In top roll bearings, for example, *Texaco Stazon* assures stain-free yarn because it won't creep onto the cot, nor throw off at high speeds.

As a loom lubricant, *Texaco Stazon* stays on the bearings and off the goods. It won't drip, or splatter under the shocks and vibration of weaving. It does not form gummy deposits and is not affected by humidity. *Texaco Stazon* is easy to apply and long lasting – making fewer applications necessary.

If oil spotting is causing you trouble and expense, a Texaco Lubrication Engineer can show you how to eliminate it – can help you reduce maintenance costs on *all* your machines. Just call the nearest of the more than 2,000 Texaco Wholesale Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TEXACO

TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

TUNE IN . . . TEXACO STAR THEATER starring MILTON BERLE on television every Tuesday night. See newspaper for time and station.

ABC

Textile Industries

Volume 114, Number 10
October, 1950

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Payment for contributed articles is made upon acceptance, before publication.

"Textile Industries" has the largest circulation among the mills of the United States of any textile publication

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Published Monthly at 115 E. Gordon
Dalton, Ga.

By W. R. C. SMITH PUB. CO.

Editorial and Executive Offices
806 Peachtree St., N.E., Atlanta 5, Ga.

Telephone: Atwood 4462

ANNUAL SUBSCRIPTION
U. S., CANADA, PAN-AMERICA—$2.00
FOREIGN—$5.00

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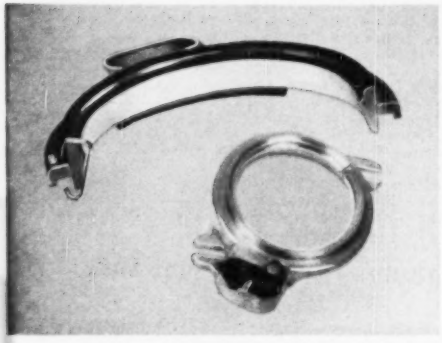
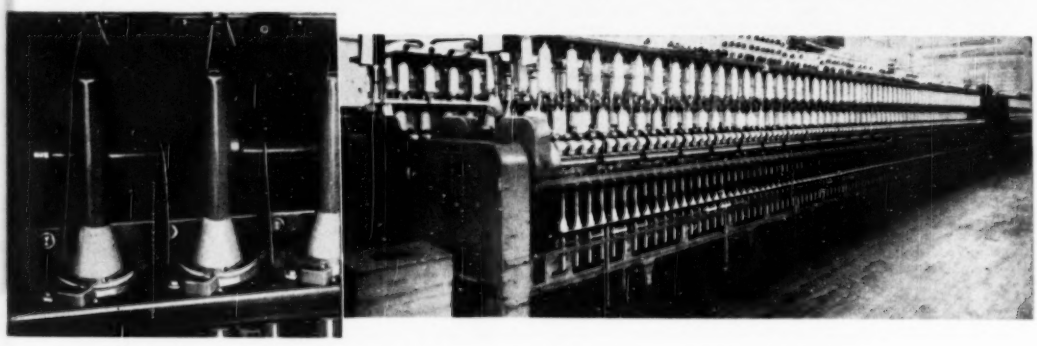
Only HERR *makes the* "CONICAL RING"

Features You Will Appreciate



1. Conical shape produces an outward and downward action with the traveler riding on the *top* and *side* face of the ring.
2. Accommodates any spinning and twisting rail condition.
3. Helps *reduce* yarn breakage and increase production of *higher quality* yarn with reduced waste.
4. Controlled flow of oil to the traveler, and NO rewicking—cleaner fabric—low oil consumption.
5. Constructed of durable drop-forged steel.

Many Mills Like Spun Fibers, Inc., Say They are "Most Satisfactory"



"After trying other types of rings, we have found Herr *Conical* Rings most satisfactory on worsted yarns. All of our new worsted frames were ordered equipped with Herr *Conical Rings.*"

EUGENE H. TIMANUS, *Manager*
Spun Fibers, Inc., Whitnel, N. C.

May we have one of our representatives call and discuss your ring problems with you.

HERR MANUFACTURING CO., Inc.

318 FRANKLIN STREET • BUFFALO, NEW YORK

The Handsomest Team in the Stadium

Look what's come out of the north to dress up the 50-yard line. It's that old reliable the storm coat . . . all decked out with new color, style and good looks!

Why the transformation?

Coat manufacturers searching for ways to smarten up their product turned to rayon. In cooperation with Avisco textile experts they have devised cavalry twill and gabardine constructions that score high in all the characteristics demanded by quality outerwear.

Smooth as a completed pass, rugged as a center smash, these materials tailor faultlessly . . . their deep-lustrous colors contrast handsomely with rich mouton collars. They're tightly woven to withstand the coldest wind that ever blew through the bleachers. They take water repellent finishes perfectly.

These useful coats are being featured at your favorite shop right now. Investigate their good looks and reasonable price. And get set for comfort that's casually correct not only for November, but all winter long! American Viscose Corporation, 350 Fifth Avenue, New York 1, N. Y.

THE SWING TO RAYON for outer wear constructions is emphasized in the Avisco October advertisement, appearing in Time Magazine and the New Yorker. It is a part of a continuing program designed to inform opinion leaders of developments in rayon. Advertisements like this benefit not only Avisco but the entire textile industry by helping to accelerate consumer acceptance for new products.

Avisco®

AMERICAN VISCOSE CORPORATION

AMERICA'S LARGEST PRODUCER OF RAYON

OPERATING OVER

1,000,000

NEW ERA SPINDLES

has given us concrete evidence that they are always successful in reducing costs.

Reports are coming back on the performance of over a million New Era Spindles. Those reports have considerable authority behind them!

They contain such convincing statements as these:

"No greasing or oiling has been done to these spindles since their installation over two years ago"

"Yarn quality produced from spinning frames equipped with New Era Spindles is definitely improved. We attribute this to the more uniform speed"

"Wear on spinning tapes is cut to a minimum, and we are replacing 60% less tapes on New Era Spindles than on the conventional type"

"More labor saving, material saving and replacement saving"

"The investment in these spindles and bobbins will pay its way out in about four years. These spindles have to date been no maintenance problem whatever"

"It was found that our spinning frames could be operated with a 7½ HP motor instead of the 10 HP motor required with the old type spindle"

A trial installation of New Era Spindles in your mill will quickly demonstrate how you can save power, reduce maintenance, and improve quality. On request, our engineers will make a forecast of savings that are possible with New Era Spindles.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE and SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

YOU CAN BE **SURE**.. IF IT'S
Westinghouse

REPORT:

"According to a study of weave room fires by the Associated Factory Mutual Fire Insurance Companies for the period from 1935 to 1945, 38.8 percent of the electrical fires in weave rooms were caused by loom motor starters."

HERE'S YOUR ANSWER, TEXTILE INDUSTRY!

Westinghouse now offers a new *Gasketed* Lint-Tight Loom Motor Starter . . . designed specifically to reduce weave room fire hazards. And it's the first starter of its kind on the market.

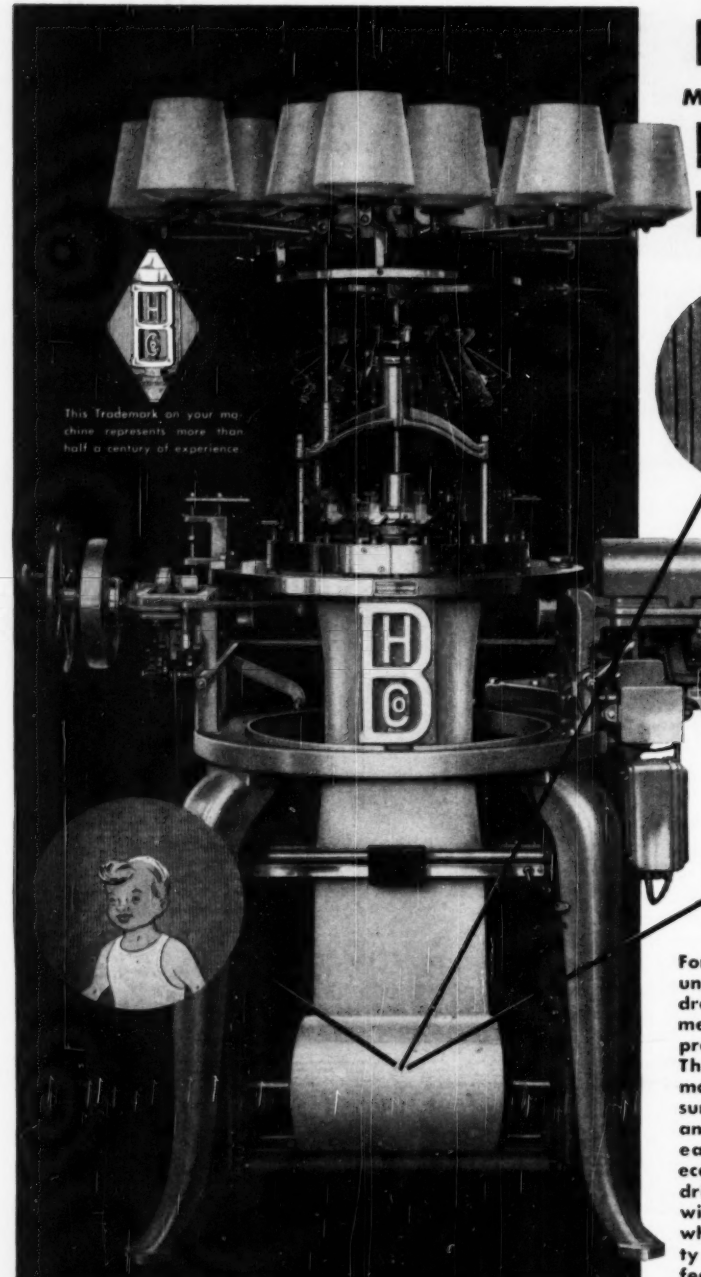
Explosion and fire caused by lint and dust reaching starter contacts can now be a thing of the past. The new Westinghouse *Gasketed,* Lint-Tight Loom Motor Starter keeps lint and dust out because the enclosure is completely sealed. A special Neoprene gasket forms a positive, continuous seal between the box and cover. Pressure from the cover clamp makes sure every crevice is filled with the pliable Neoprene gasket . . . positive assurance that combustible elements cannot enter the enclosure. Thus, this cause of fire is prevented *before it* can happen.

What's more, you get these exclusive features, too! Positive Disc-Type, Bimetallic Overload Protection . . . "De-ion" Arc Quenchers . . . Quick-Make, Quick-Break rotary handle mechanism that cannot be kicked or bumped "ON" or "OFF" inadvertently. Your nearby Westinghouse representative can give you all the facts. Ask him for a copy of B-5256, or write Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-30038

Westinghouse
LINT-TIGHT
LOOM MOTOR STARTERS

BRINTON

MAXIMUM FEED RIB BODY MACHINES



H. BRINTON COMPANY

KENSINGTON AVENUE AND M STREET

PHILADELPHIA 24, PA., U.S.A.

For the manufacture of fine underwear for infants, children, boys, men and women, the BRINTON Machines produce a superior fabric. They incorporate every modern feature that assures satisfactory performance — high production — ease of operation and economy. Individual motor drive, electric stop motion with safety control, free wheeling, improved capacity take-up reel and extra feeds. Sizes — 8″ to 26″ diameter — from 8 to 26 feeds. Plain or automatic 1x1 and 2x2. Precision machines for quality underwear.

Our Bulletin awaits your request.

FOR TEXTILE PRINTING

A unique, new dyestuff characterized by its beautiful turquoise shade, its good all around fastness properties, and simplicity of application to textile fabrics.

Alcian Blue 8GS* is one of the many outstanding new products to be introduced to the American textile industry by Arnold, Hoffman through its new association with Imperial Chemical Industries, Limited. For complete technical information and shade card, call or write your nearest AHCO office.

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ARNOLD, HOFFMAN & CO. INCORPORATED • EST. 1815 • PROVIDENCE, R. I.
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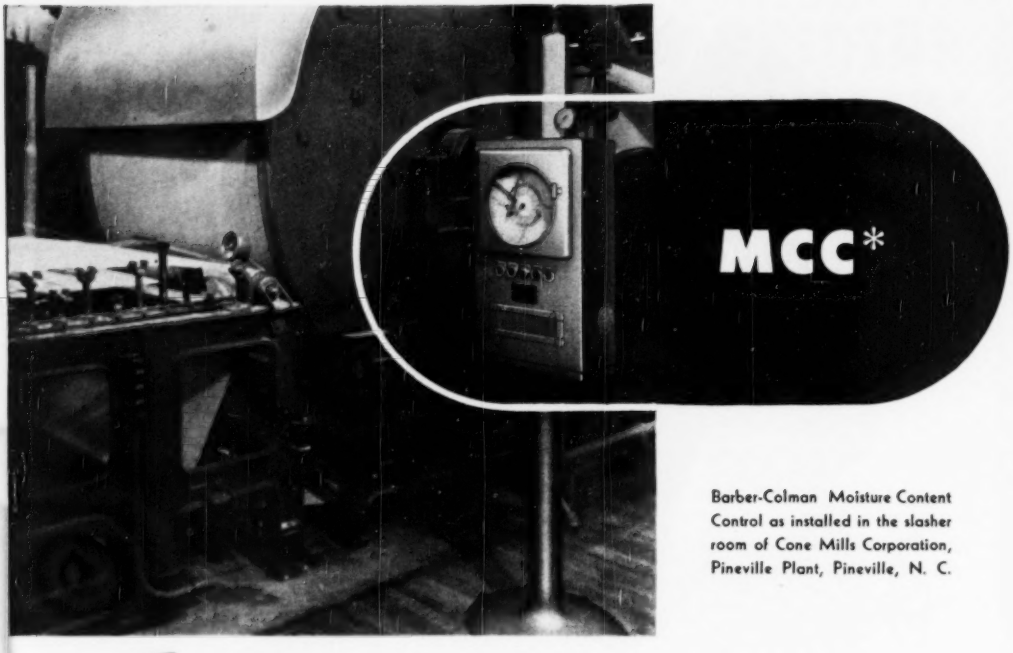
*Patented



Barber-Colman Moisture Content Control as installed in the slasher room of Cone Mills Corporation, Pineville Plant, Pineville, N. C.

Electronic *MOISTURE CONTENT CONTROL

Barber-Colman *all-electronic* units are applicable to all types of warps processed on slashers having any type of variable-speed drive. This automatic Moisture Content Control is a proportioning type instrument, equipped with automatic reset to control at a constant level so there is no "hunting" in the changes of the variable-speed drive. Let your Barber-Colman representative show you how to obtain —

LOWER COSTS
GREATER PRODUCTION
BETTER PRODUCTS

BARBER-COLMAN ENGINEERING SERVICE IS BACKED BY YEARS OF EXPERIENCE IN TEXTILE PROCESS CONTROLS

BARBER COLMAN

BARBER-COLMAN COMPANY, Rockford, Illinois

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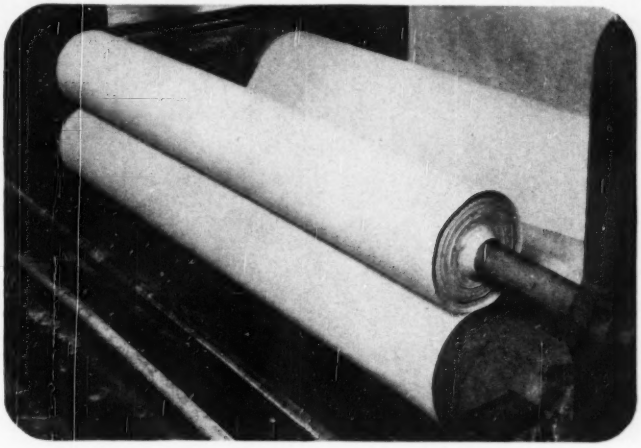
COATED PRODUCTS COMMENTS



More ACCURACY on the Rollers...

Taking up fabric evenly on textile rollers *without slip,* TEXALOX metallized cloth by CARBORUNDUM assures delivery of a definite length of material.

This unique product by CARBORUNDUM gets unusual gripping power from thousands of metal-coated granular projections—diamond-hard, but not sharp. These projections grip the fibre securely—draw it gently, with an even, vibrationless pull.

TEXALOX cloth by CARBORUNDUM also eliminates costly star marks and broken fibres which result from use of faulty "take-up" roll covering. It is impervious to the action of moisture, dyes, oils, acids and various special chemicals used in the textile industry.

Your CARBORUNDUM representative can supply you with complete information. The Carborundum Company, Coated Products Division, Niagara Falls, New York.

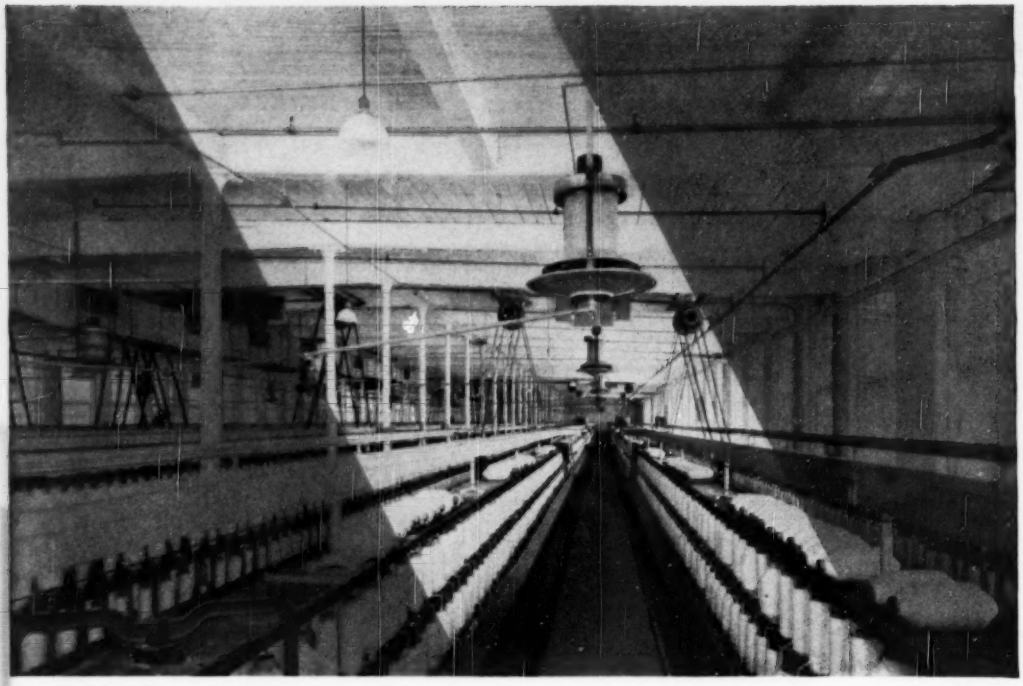
COATED ABRASIVES BY

CARBORUNDUM

TRADE MARK

Making ALL abrasive products...
to give you the proper ONE

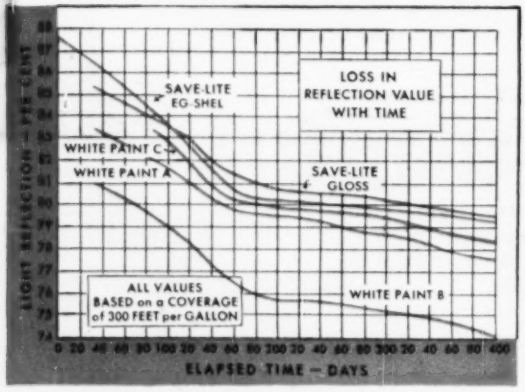
"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company



PAINT AWAY DARKNESS with

KEM SAVE-LITE

...the WHITER MILL WHITE!


LIGHT REFLECTION—PER CENT
SAVE-LITE EG-SHEL
LOSS IN REFLECTION VALUE WITH TIME
WHITE PAINT C
WHITE PAINT A
SAVE-LITE GLOSS
ALL VALUES BASED on a COVERAGE of 300 FEET per GALLON
WHITE PAINT B
ELAPSED TIME — DAYS

SAVE-LITE STAYS WHITE LONGER!

Note how Save-Lite retains its reflective qualities, or whiteness, longer than any of the other typical interior white finishes used in this test. Similar tests with the same finishes show Save-Lite to have better opacity and higher initial whiteness as well.

To insure better seeing conditions for your people—longer—look for these things when you buy a Mill White Finish:

1. **High light reflecting power**—the percentage of light reflected by the paint is a measure of its whiteness.

2. **Ability to remain white indefinitely**—you are buying whiteness—will the paint that you apply *stay* white?

3. **Covering capacity**—it takes a paint with maximum hiding power to supply maximum light reflectance at lowest cost per unit area.

4. **Durability**—the paint you put on now will be the foundation when painting schedules again call for refinishing. Make sure that foundation is as sound 5 to 10 years from now as it is today!

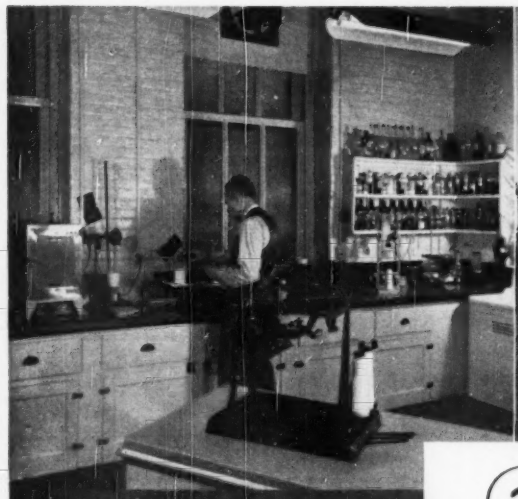
Sherwin-Williams Save-Lite Finishes provide a complete line of brilliantly *whiter* interior finishes because all of these factors are accurately controlled. Save-Lite not only gives greater coverage per gallon and higher light reflectance but it retains its whiteness and reflective qualities longer (see chart). These facts are borne out not only in laboratory tests but in year-after-year experience in leading textile mills the country over.

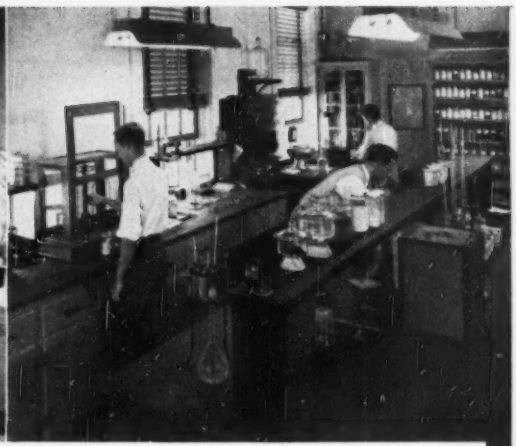
Before selecting your interior finishes, let a Sherwin-Williams representative demonstrate the advantages of Sherwin-Williams Kem Save-Lite—the *whiter* White! The Sherwin-Williams Co., Cleveland 1, Ohio.

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES
MILL VILLAGE PAINTS





USE THESE LABORATORIES TO IMPROVE YOUR TEXTILE PRODUCTS

AS we work with all sizing and finishing raw materials and chemicals, our technicians are familiar with the advantages and limitations of each type. This is a *"custom"* business. Our Laboratories therefore can function as a *department* of your company!

Look over the partial lists of operations and products on this page. Write us about *the improvements you want* in your sizing or finishing operations. We'll gladly lend you valuable aid in utilizing the advances of textile research in meeting today's production goals of, 1. High quality, 2. Low cost, 3. Improved output.

Paisley SCIENTIFIC TEXTILE SERVICE

(LIQUID)
TEXTILE OILS, SIZING and FINISHING SPECIALTIES

THREE STAR OIL
Soaking rayon preparatory to throwing crepe.

NOX-FOME No. 2
Defoamer for textile sizing. A concentrate containing no added water.

A.R.N. No. 3
One-piece warp size for synthetic yarns, yielding smooth hand and requiring no desizing.

A.R.N. No. 8
Warp size for yarn dyed fabrics. Added to Stymer sizing formula, it prevents "stickers" and increases weaving efficiency. Prevents "frost".

M.N.T. CONCENTRATE
Catalytic softener for slashing of cotton warps, reducing time of preparation with lower shedding at the loom. Also used for nylon sizing.

RESILEX NC-8
Resin softener-penetrant, film-forming with animal glue for warp sizing of synthetic yarns.

PENETRA-SET
For conditioning of all yarn fibres.

Morningstar ESTABLISHED 1851

(DRY PRODUCTS)

COTTON WARP SIZING
Arcostoocrat Potato Starch and *Nestaco* Potato Starch. Highest quality, uniformity, constant performance.

RAYON WARP SIZING
Reselvol, Styrezgum and Rezicose for every spun synthetic. Bone, Chrome and Hide Glues of uniform color and test.

PRINTING GUMS
Corn, Potato and Tapioca to meet specific requirements.

FINISHING
Dextrines and Thin Boiling Starches of every solubility or viscosity—from Corn, Potato or Tapioca.

THROWING
Synthogel Nos. 9 and 10 yield uniform pebble thru ease of removal in the boil-off.

CARPET & FELT SIZING
A wide range of Dextrines and Starches specially converted.

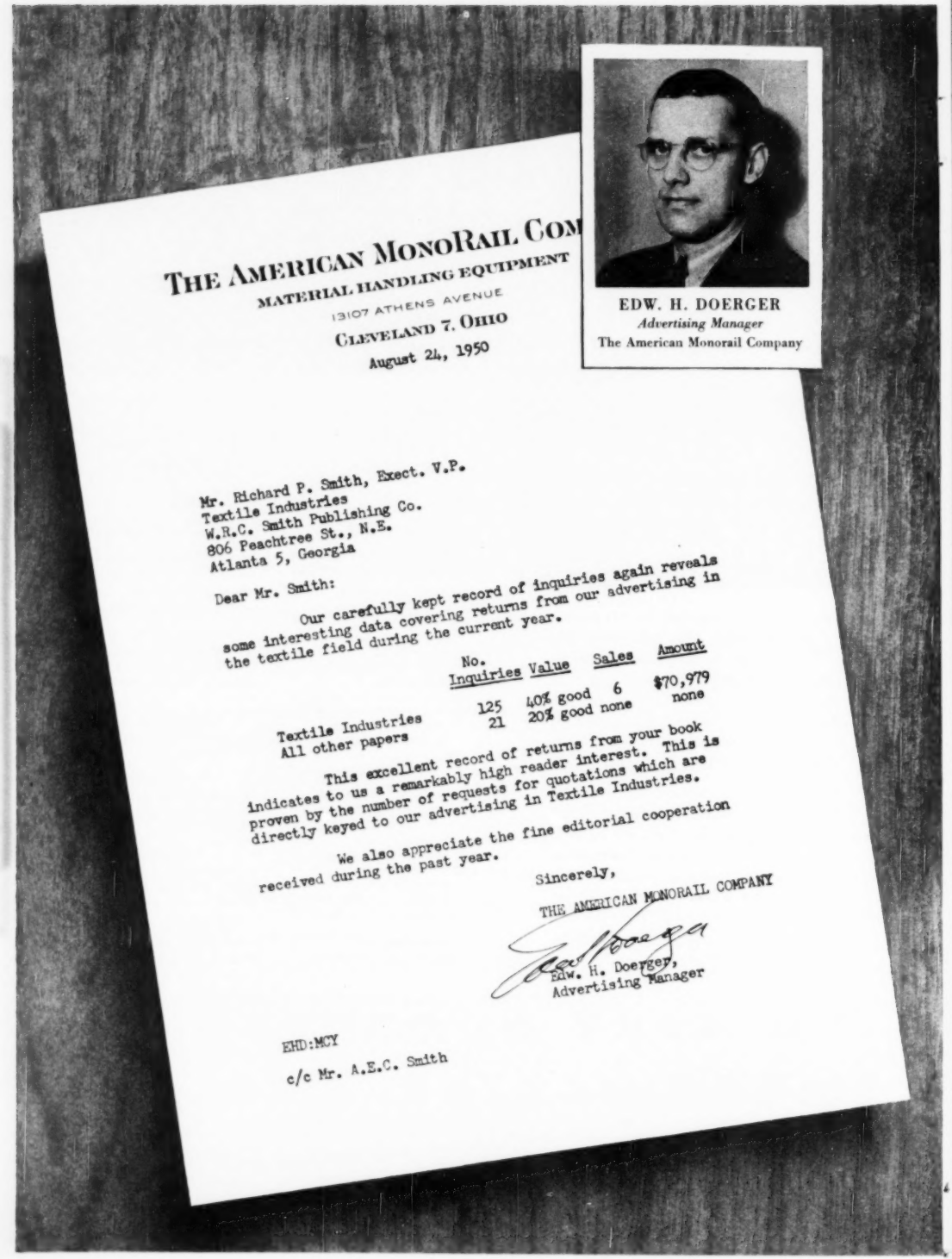
PAISLEY PRODUCTS INC.
DIVISION OF
MORNINGSTAR, NICOL, INC.

1770 CANALPORT AVE., CHICAGO 16, ILL. TELEPHONE: CANAL 6-2219

630 WEST 51ST STREET, NEW YORK 19, N.Y. TELEPHONE: COLUMBUS 5-2860

SALES OFFICES: Baltimore • Boston • Cincinnati • Cleveland • Denver • Detroit • Indianapolis • Jacksonville • Little Rock • Minneapolis • New Orleans • North Providence • Ogden • Orlando • Philadelphia • Pittsburgh • Rochester • St. Louis • Toledo

Manufacturers of Scientific Textile Oils-Sizing and Finishing Specialties-Dextrine and Starch Products



EDW. H. DOERGER
Advertising Manager
The American Monorail Company

THE AMERICAN MONORAIL COM
MATERIAL HANDLING EQUIPMENT
13107 ATHENS AVENUE
CLEVELAND 7, OHIO
August 24, 1950

Mr. Richard P. Smith, Exect. V.P.
Textile Industries
W.R.C. Smith Publishing Co.
806 Peachtree St., N.E.
Atlanta 5, Georgia

Dear Mr. Smith:

Our carefully kept record of inquiries again reveals some interesting data covering returns from our advertising in the textile field during the current year.

	No. Inquiries	Value	Sales	Amount
Textile Industries	125	40% good	6	$70,979
All other papers	21	20% good	none	none

This excellent record of returns from your book indicates to us a remarkably high reader interest. This is proven by the number of requests for quotations which are directly keyed to our advertising in Textile Industries.

We also appreciate the fine editorial cooperation received during the past year.

Sincerely,

THE AMERICAN MONORAIL COMPANY

Edw. H. Doerger,
Advertising Manager

EHD:MCY

c/c Mr. A.E.C. Smith

TEXTILE INDUSTRIES sells $70,979.00 worth of equipment for this advertiser

Money talks!

Results from American Monorail advertising speak for themselves. The reason behind the remarkable sales developed from TEXTILE INDUSTRIES' inquiries, however, is accurately stated by Edward H. Doerger—*reader interest.*

> *"This excellent record of returns from your book indicates to us a remarkably high reader interest."*

Among the active mill men receiving TEXTILE INDUSTRIES, reader interest and reader action mean practically the same thing. Textiles are booming; already this year expenditures for cost-saving equipment, such as American Monorail products, have exceeded those of 1949 because mill men are taking action to increase production, improve quality and reduce waste.

Purchases and recommendations for purchases originate in the mills. It is the executives, managers, overseers and other supervisory personnel *actually on the job in the mills* who know best what machinery and equipment is needed for better production. These are the men who must be sold FIRST and these are the men you reach through TEXTILE INDUSTRIES.

Sales results like these achieved by The American Monorail Company are no accident. They come from careful market and publication analysis teamed with the consistent use of forceful advertising copy.

From past experience, manufacturers selling to the textile industry know that TEXTILE INDUSTRIES has leadership in readership. It is the magazine they can count on to reach the core of all mill buying decisions.

TEXTILE INDUSTRIES should be the keystone of your bridge to bigger sales in textile manufacturing plants—put it on your schedule NOW.

Send for this FREE BOOK today! It's valuable to you!

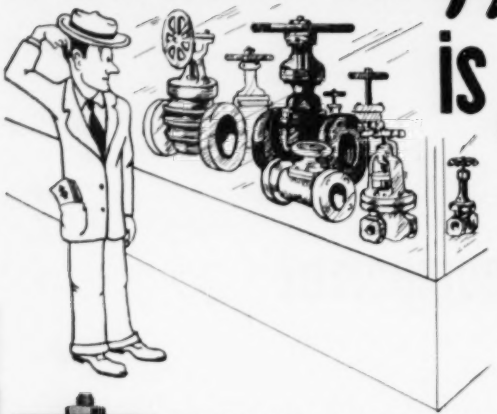
Important textile market facts and full information on TEXTILE INDUSTRIES are contained in the new N.I.A.A. presentation. You will find it useful in planning 1951 schedules. Copies will be mailed on request; write for yours.

Textile Industries

806 Peachtree St., N. E., Atlanta 5, Georgia

W.R.C. SMITH PUBLICATIONS

"Window Shopping" for Valves is poor economy



Reading advertisements is like "window shopping"—it's a good way to see what's on the market. But don't let it influence you into buying your flow control equipment from different sources.

Because if you buy all your valves from one source you avoid these pitfalls:

Complications in stocking spare valve parts.

Difficulties that confront the maintenance department in making repairs on a variety of valves.

The necessity of carrying a much larger stock of repair parts.

The chances of installing valves that are not backed by adequate engineering service.

By offering the *only* COMPLETE line of valves available to Industry today, Powell makes this possible. And if you consult Powell Engineers and select the right valve to suit each individual service, your flow control problems are ended.

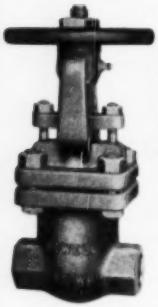


Fig. 2490 (18-8S, 18-8S Mo, Durimet "20") and **Fig. 2492** (Monel Metal, Nickel, Ampco, Everdur, Hastelloy Alloys A-B-C-D). 150-pound O. S. & Y. Gate Valve with screwed ends and solid wedge. Can be supplied with double wedges. Flanged end valves have face-to-face dimensions conforming to MSS SP-42. Globe valves of this design are also available.

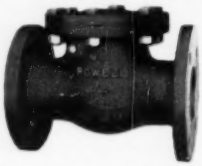


Fig. 2433—150-pound Bronze Regrinding Swing Check Valve with flanged ends and bolted flanged cap. Disc has ample lift to permit full, straightway, unobstructed flow through the valve body.

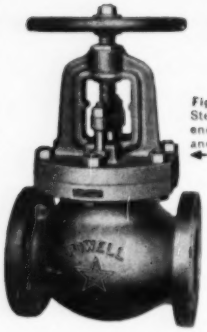


Fig. 1531—Class 150-pound Cast Steel Globe Valve with flanged ends, outside screw rising stem and bolted flanged yoke.

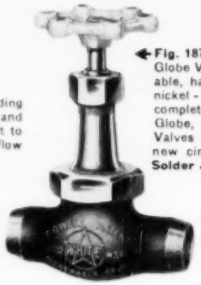


Fig. 1872 — Bronze Solder Joint Globe Valve. Regrindable, renewable, hard-wearing "Powellium" nickel-bronze seat and disc. A complete line of Solder Joint Globe, Angle, Gate and Check Valves available. Write for our new circular—**"Powell Bronze Solder Joint Valves."**

Fig. 1893—Flanged end Gate Valve designed and developed especially for Paper Mill service. Body, bonnet and yoke are cast of 3% Nickel Iron; screwed-in seat rings are of 18-8 SMo; solid wedge is made of Ni-resist.

The Complete Powell Line includes Globe, Angle, "Y", Gate, Check, Non-return, Relief and Flush Bottom Tank Valves in Bronze, Iron, Steel and a wide range of Corrosion-resistant metals and alloys.

Ask your nearest Distributor—or write direct

The WM. POWELL CO., 2525 Spring Grove Ave., P. O. Box 106, Station B, Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

POWELL VALVES

SANDOZ PRESENTS *The color achievement of the month*

Muted Tones ...BY ALEXANDER SMITH

If we were to continue the *musical* figure of speech used by Alexander Smith in advertising its Set-twist broadloom carpeting...

seven shades of *muted* lustre,
from *hushed* pastels to *resonant*
deep tones

we might be tempted to add...*and the melody lingers on.*

For the color beauty of fabrics dyed with Sandoz colors—which are among the supplies used by Alexander Smith—is virtually imperishable.

To preserve the character of the shade in the face of light, cleaning and wear, carpeting manufacturers use such Sandoz colors as

ALIZARINE L VIOLET RCN
BRILLIANT ALIZARINE L BLUE 3F
XYLENE FAST RUBINE 3GP
XYLENE L YELLOW 2G AND 3G

In the mill, too, these Sandoz colors are a delight to use—they are exceptionally level-dyeing even in the lightest shades, and they retain their full brightness throughout processing.

For any chrome, acid or direct dyes ...or auxiliary chemicals...and for both natural and synthetic fibres... be guided by the successful "color achievements" you see in these Sandoz advertisements.

COTTON AND RAYON DYERS! NOW — DIRECT DYE WITH COMPLETE CONFIDENCE IN COLOR FASTNESS

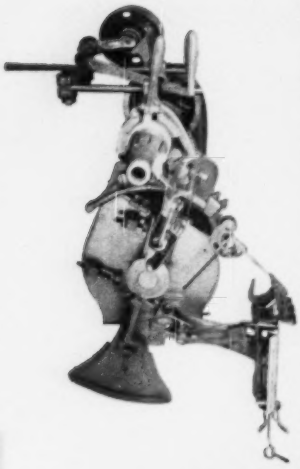
New CUPROFIX colors and after-treatment give fastness to washing, light, etc., that formerly required more expensive vat dyeing. Write for booklet on CUPROFIX, already adopted by dozens of mills.

SANDOZ CHEMICAL WORKS, INC., 61 VAN DAM STREET, NEW YORK 13, N. Y.

Application laboratories and stocks at Boston, Philadelphia, Charlotte, Chicago, Los Angeles, Toronto • Other branches at Providence, Paterson and Montreal

SANDOZ *thinks ahead with textiles*

SANDOZ



You are looking at the

Most Flexible Winding Spindle

in the industry

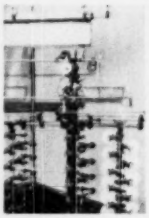
This basic spindle unit of the No. 50 Universal Precise Winder is used . . . not only to wind more than 90% of the world's coned synthetic yarn . . . but also to produce a wide *variety* of special work that is only hinted at on this page.

WINDING CREPE WITH MAGNETENSION

This device utilizes a magnetic field to provide constant, smooth tension, eliminating excessive peaks or loss of tension control caused by any uneven delivery from supply package.

WINDING THREAD ON BOBBIN SPOOLS

Large compact packages to deliver thread overend for the cutting trade are wound with this attachment equipped with automatic visible counter. A similar attachment winds the so-called "miniature" bobbin spool.



WINDING MULTIPLE ENDS FOR WIRE INSULATION, ETC.

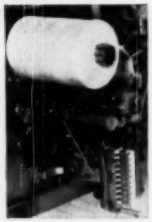
Packages containing up to 30 ends are wound in perfect tape form from packages of previously-inspected yarn. Individual stopping mechanisms for each end permit tying single strands, avoiding "bunch" knots.

WINDING PINEAPPLE CONES OF NYLON

To put nylon into the best delivery form for full-fashioned, tricot, and circular knitting, the No. 50 Pineapple Coner with emulsion attachment is used, winding from tubes previously sized on the Universal No. 250B Single End Sizer.

WINDING 3° 51' CONES

The large diameter of this cone increases production upwards of 12%. It is especially suitable for fine denier nylon because it delivers with more uniform tension on the knitting machine.

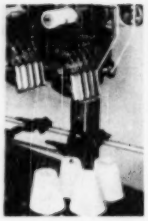


WINDING DYE TUBES OF SYNTHETIC YARNS

This Ray-Silk attachment winds synthetic yarn with a minimum amount of applied tension and pressure to produce soft tubes for uniform dyeing.

WINDING TWO OR MORE COPS

Two or more small packages per spindle can be wound with individual paraffin attachment, tension and stopping mechanisms. For example: three cops each 3½ in. long can be wound on one spindle.

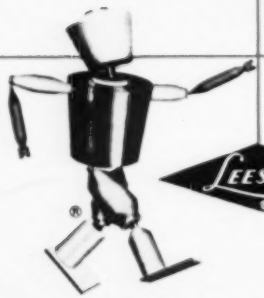


WINDING YARN FOR COVERING RUBBER

Here, two tubes per spindle, two ends per tube, are being wound for a rubber covering machine. Covered rubber yarn in skein form is then wound onto pineapple cones for the next operation.

WINDING HAND KNITTING SKEINS

Skeins of home knitting yarn are wound on No. 50 Winders equipped with special electrical attachments for automatically stopping all six spindles simultaneously at the predetermined yardage.



LEESONA®

UNIVERSAL WINDING COMPANY

Universal Division

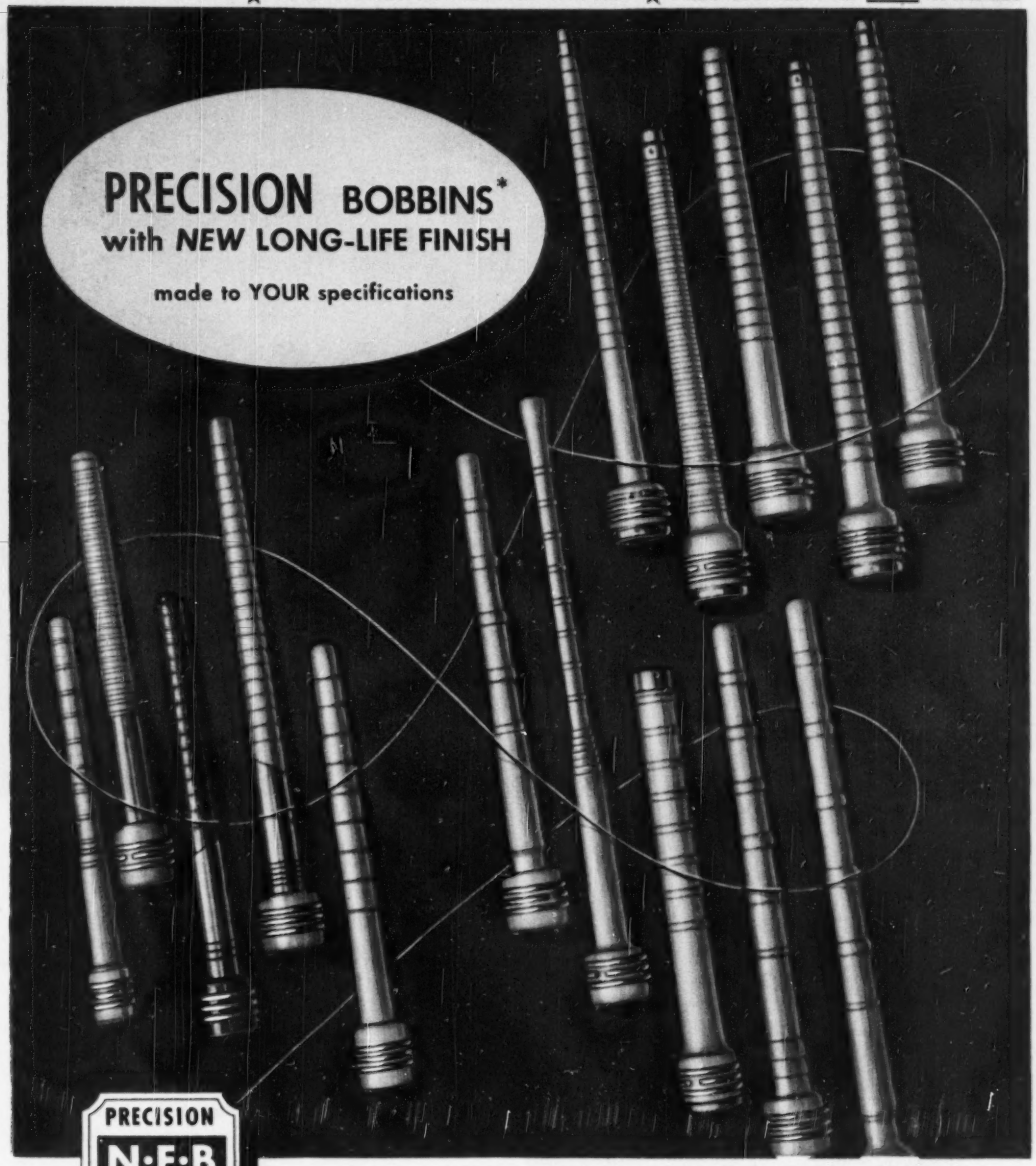
P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

PRECISIONED TO SIZE ★ PRECISIONED FOR CONCENTRICITY ★ PRECISIONED FOR YOUR SPINDLES



PRECISION N·E·B BOBBINS

For SILK and SYNTHETICS — COTTON and SPUN RAYON — WOOLENS and WORSTEDS

NEB's *New* LONG-LIFE Finish eliminates yarn abrasion and snagging; withstands heat up to 125° and chemicals in detergents. Rugged, for hard use, yet *smooth and gentle* for the finest filaments.
Include NEB PRECISION ENGINEERED BOBBINS with NEW LONG-LIFE Finish in your next requisition — your next order — and *compare!*

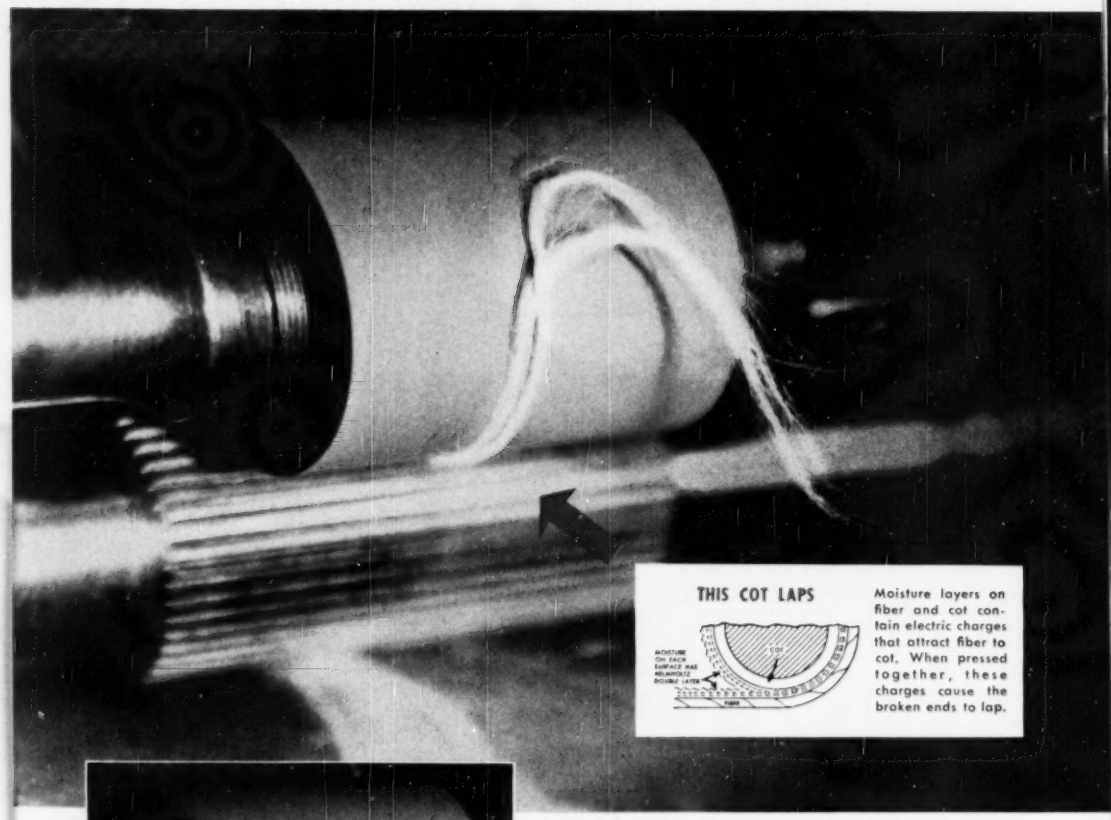
NEW ENGLAND BOBBIN & SHUTTLE CO.

Makers of PRECISION *Automatic Loom Bobbins*

NASHUA, NEW HAMPSHIRE

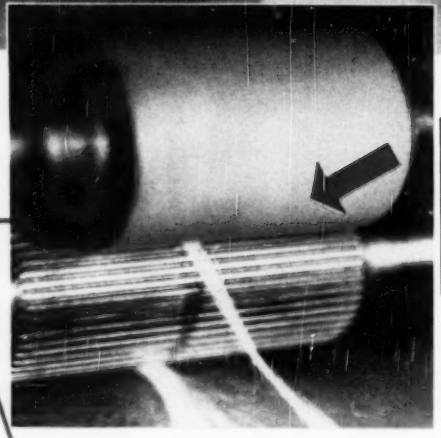
Representatives:

H. W. CURTIS, 735 W. Crescent Ave., Allendale, N. J.
HARRIS & UNDERHILL, 446 Statler Building, Boston, Mass.
HENRY H. HERSEY, Norwood Place, Greenville, S. C.
ARTHUR W. HARRIS, 443 Stonewall St., S. W., P. O. Box 1982, Atlanta, Ga.
THE CHARLOTTE SUPPLY CO., Charlotte, N. C.
Export Agents: VANDERBURGH & CO., INC., 25 Beaver Street, New York 4, N. Y.

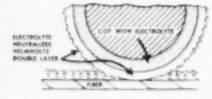


THIS COT LAPS

Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, these charges cause the broken ends to lap.



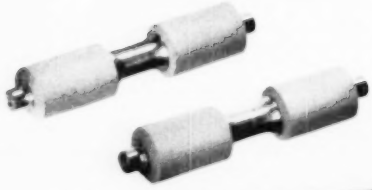
THIS COT DOESN'T LAP



Electrolyte in patented Accotex rubber neutralizes the electric charges. This action eliminates the attraction of fiber to cot and prevents lapping.

These two Accotex Cots handle most

In most mills, Armstrong's general purpose roll covering, NC-727 Accotex, will satisfy every spinning need. This synthetic cot has good lap resistance and minimizes eyebrowing. Where lapping is an especially severe problem, J-490 Accotex Cots are recommended. In addition to the patented electrolyte feature, these cots provide an extra-smooth surface that further inhibits lapping.



ACCOTEX COTS
CORK COTS

Most lapping can be prevented

Patented Accotex formulation eliminates basic cause of lapping

Mill men all over the country report, "Lapping is no problem on frames equipped with Armstrong's Accotex® Cots." Here's the scientific reason why.

Accotex Cots include certain materials called electrolytes. This patented formulation eliminates a basic cause of lapping—the electrical attraction between cot and fiber. Actually, it tends to repel broken ends. The diagrams and photographs shown on the left illustrate just how Accotex Cots do this.

Special formulation gives Accotex Cots other desirable spinning qualities, too. Built-in durability enables these cots to give five to six years of front line spinning with most yarns. Lasting resilience prevents flattening and flute marks during shutdown periods. In short, Accotex Cots are made to give trouble-free service with a minimum of attention.

The only maintenance that's needed with Accotex is an occasional quick buffing. Replacement is just as easy. Because Accotex Cots are seamless, pre-glued, and made to the size of your rolls, they can be assembled in one simple operation.

All cots in the Accotex family offer lap resistance, long life, and easy maintenance. Certain types, however, may offer specific advantages for your mill. We suggest that you contact your Armstrong representative. He can arrange a test installation of the Accotex Cot best suited to your operation. Write Armstrong Cork Company, Textile Products Department, 3610 Arch St., Lancaster, Pennsylvania. Accotex Cots are available for export.

of your roll covering needs

Whether you are spinning cotton, wool, or synthetics, Armstrong can supply you with an Accotex Roll Cover especially formulated for the job. Call your Armstrong representative today and ask him to arrange a test installation of the Accotex Cot best suited to your spinning needs.

ARMSTRONG'S ACCOTEX COTS

How to simplify your piping jobs ...Standardize on the CRANE line

ECONOMICAL VALVES FOR LOW PRESSURES

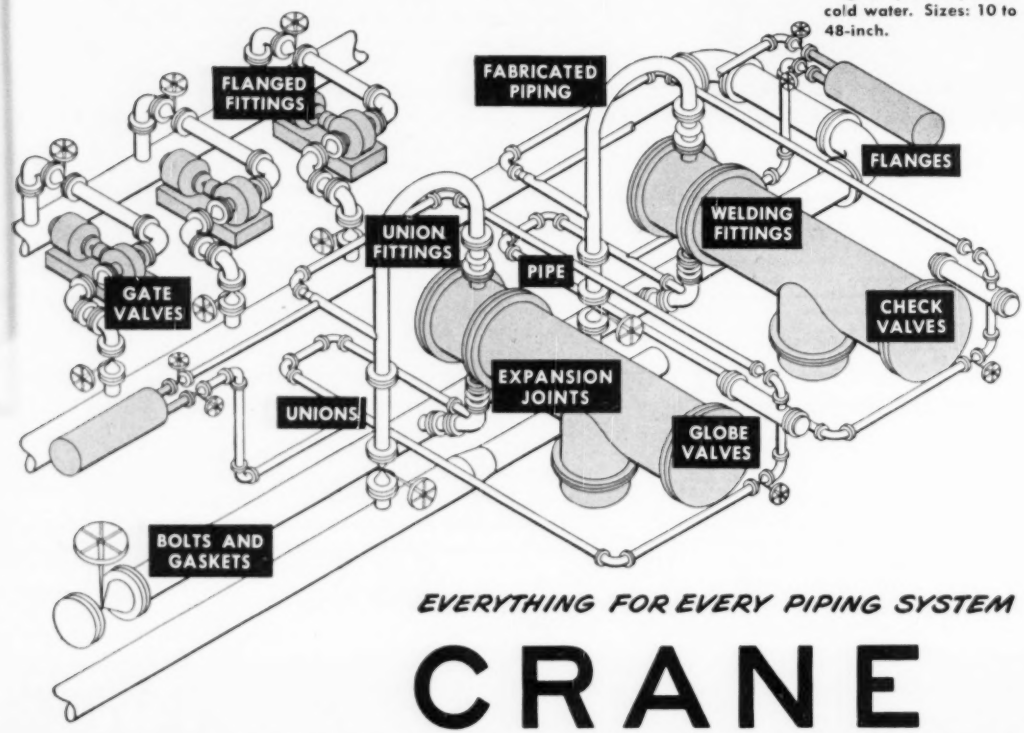
Keep Crane 25-Pound Iron Body Double Disc Gates in mind for services that don't require the usual 125-Pound valves. Rated at 25 Pounds Steam or Gas, and up to 50 Pounds Water, depending on size, they give superior service in a wide variety of applications. Use them inside or out; their oval-shaped body and bonnet have ample reserve strength under line stresses. Short and compact, they take minimum space in pipe lines.

For durable, tight seating—yet easy opening—seat rings and disc faces are brass. Crane 2-piece ball-type gland maintains uniform pressure on packing; prevents binding on stem; lengthens packing life. When specified, these valves can be fitted with gears, by-pass, and clean-outs; also can be motor or cylinder operated; non-rising stem, flanged or hub ends, up to 36-in.; O.S. & Y. type with flanged ends only up to 48-in. See your No. 49 Crane Catalog.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

No. 793½, Outside Screw and Yoke. Working Pressures: 25 pounds steam or gas; up to 50 pounds cold water. Sizes: 10 to 48-inch.

ONE ORDER TO CRANE COMPLETELY EQUIPS CIRCULATING, COOLING AND SERVICE WATER PIPING SYSTEMS



EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

FINISH CONTROL *is simple as* A B C *with* Profine

A You'll revise all your previous ideas on controlling fabric or yarn finishing when you start using Profine. By varying the concentration of Profine solutions, you can "custom finish" fabrics to meet customers' demands. You can get the degree of softness, body or "hand" you want.

B Profine applications are almost unlimited. You can use it in soaking baths, in dye becks, dolly washers, jig or package machines, in quetsches or padders.

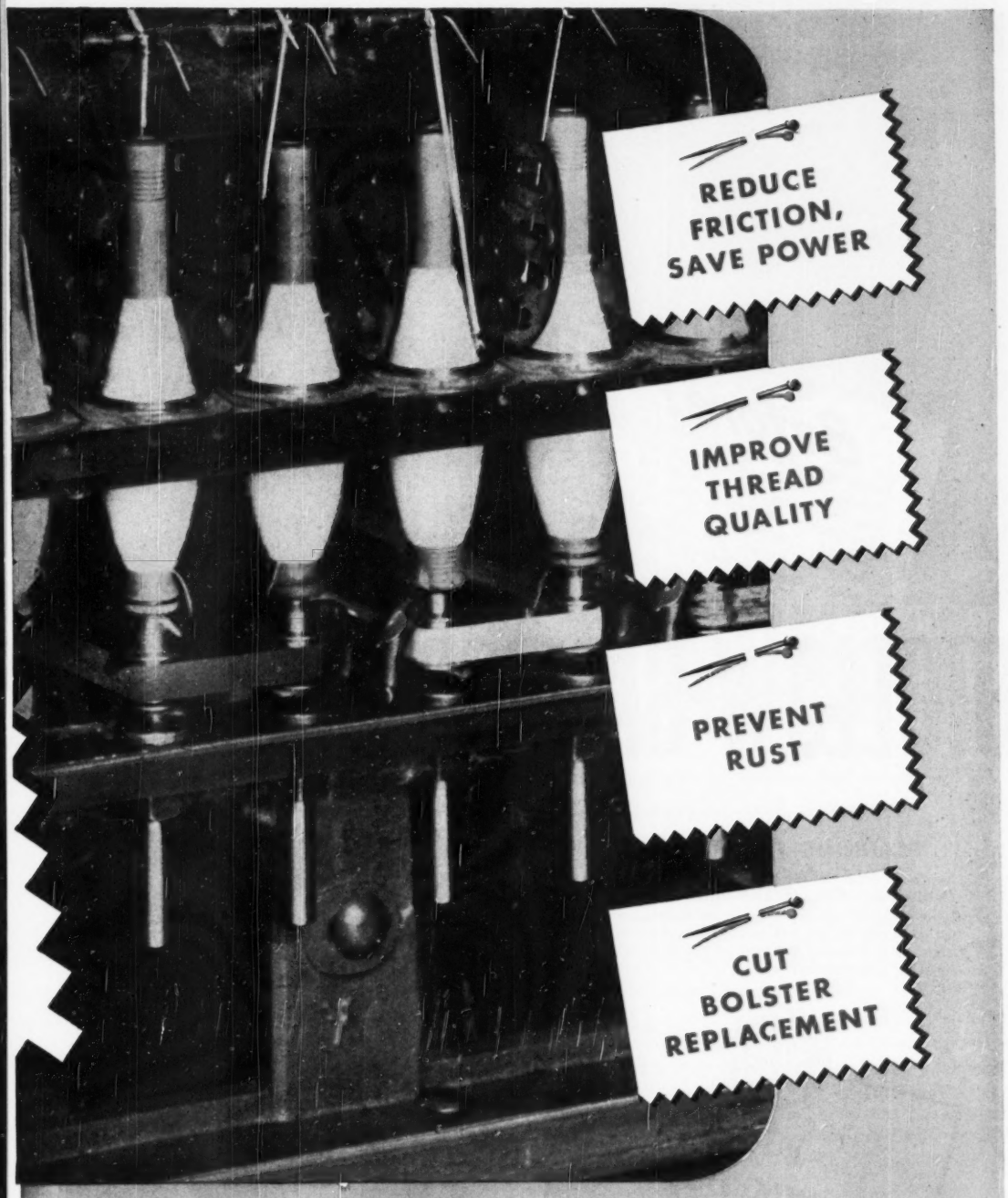
C In readily soluble flake form, Profine is self-emulsifiable. Emulsions are very stable, have no effect on shade, have no tendency to form objectionable odors or discoloration.

Profine definitely up-grades fabrics—greatly increases their saleability. It will pay you to use Profine.

Procter & Gamble CINCINNATI, OHIO

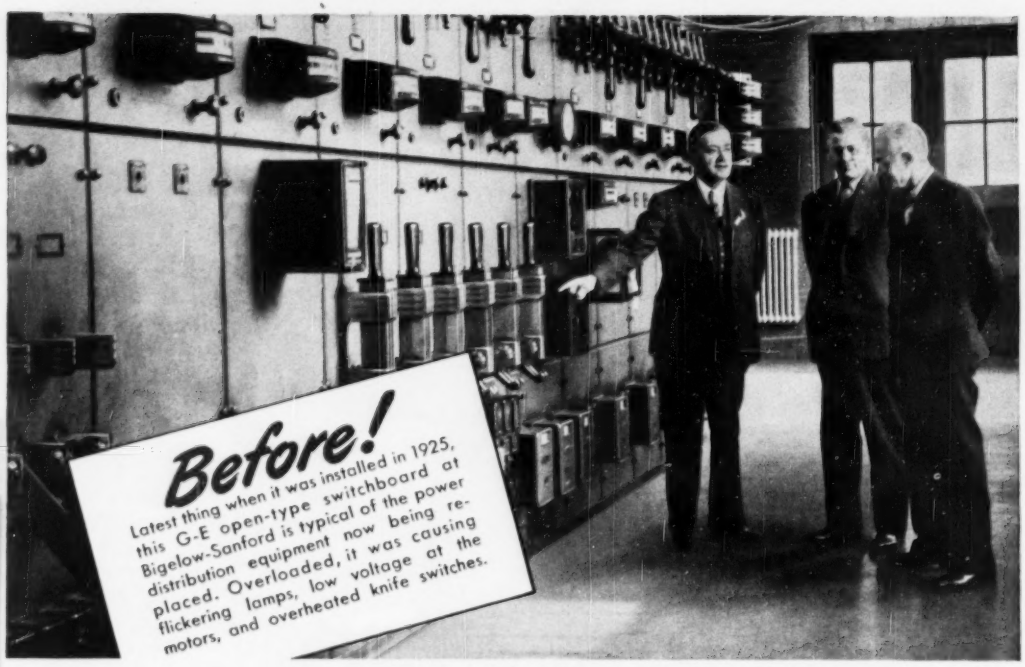
MAKERS OF OLATE, PROXOL AND ORVUS

Pare Down Power Costs...
Prolong Bolster Life...
with...
SINCLAIR LILY WHITE OILS
If you reduce the friction on each spindle in the mill—even slightly—
the amount of power thus saved over the entire mill is enormous and results in a
substantial saving in operating cost. You can reduce this friction—
according to mill records—with Sinclair Lily White Oils AX, BX and CX.
Besides paring down power costs, less spindle friction means bolsters last longer,
reducing maintenance and delaying replacement. Moreover, less bolster wear
means less wobbling—less breakage and higher quality production.
The correct grade of Sinclair Lily White Oil can save you money in your mill.
SINCLAIR TEXTILE



LUBRICANTS

For lubrication counsel, see your nearest Supplier of Sinclair Products or write Sinclair Refining Company, 630 Fifth Avenue, New York 20, N. Y.

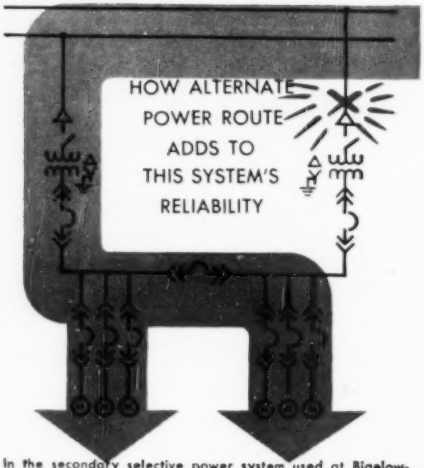

Before!
Latest thing when it was installed in 1925, this G-E open-type switchboard at Bigelow-Sanford is typical of the power distribution equipment now being replaced. Overloaded, it was causing flickering lamps, low voltage at the motors, and overheated knife switches.

BIGELOW-SANFORD BOOSTS

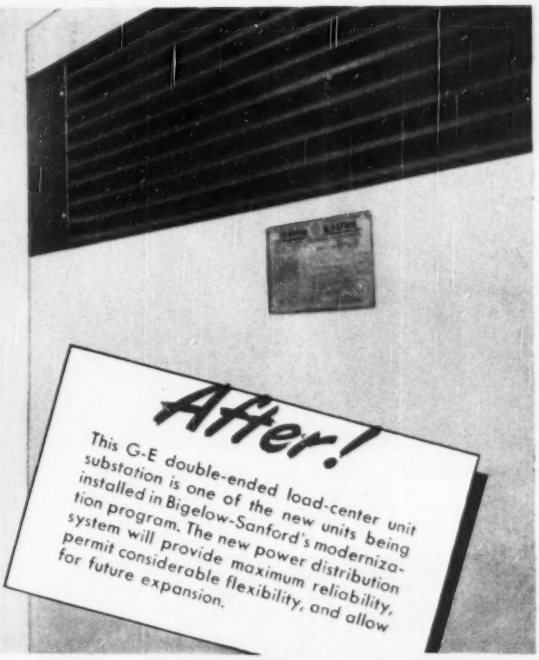
PLANNING TO MODERNIZE?

See how other textile mills are doing it in General Electric's new full-color and sound movie, "Textiles Unlimited." Over 40 ways to improve quality and cut costs are shown. Ask your G-E representative to arrange a showing for you of this More Power to America presentation.

POWER DISTRIBUTION SYSTEMS for Textile Mills



In the secondary selective power system used at Bigelow-Sanford, a power detour to secondary circuits is provided by closing the tie circuit breaker between the secondaries of two transformers. Thus, if a primary-circuit fault de-energizes one transformer, essential load is bypassed to the other, and important production keeps going.


After!
This G-E double-ended load-center unit substation is one of the new units being installed in Bigelow-Sanford's modernization program. The new power distribution system will provide maximum reliability, permit considerable flexibility, and allow for future expansion.

PRODUCTION CONTINUITY

Modern General Electric power-distribution system, replacing outworn equipment, assures reliable textile-mill power—helps keep machines on the job!

Recognizing that modern textile machinery is helpless without adequate electric power, the Bigelow-Sanford Co. has completely modernized the outgrown power-distribution system in its Amsterdam, N. Y. plant. The new equipment was purchased from General Electric, taking full advantage of this company's technical assistance and know-how.

For thorough reliability, the new system uses the modern load-center principle with a dual power-supply route. Power at 13.2 kv is carried right to the mill's centers of electrical load, where it is stepped down to 600 volts for utilization. Now light flicker and cable heating losses are reduced, proper voltage is maintained at the motors, and production delays are cut—because machines stay on the job more continuously!

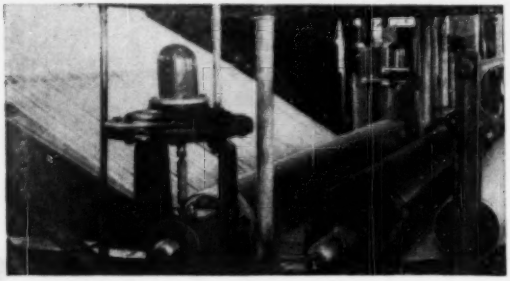
Your power distribution system, too, can be modernized to pay off in more continuous production, when engineered to your specific needs by G-E textile-mill specialists. To help make your mill modernization program a success, call in your G-E representative early. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

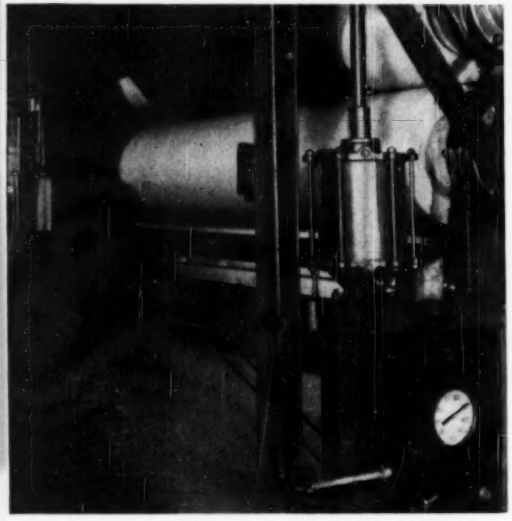
6547

NEW, improved pneumatic roll loading

— cuts operation and maintenance costs



DIAPHRAGM-TYPE Pneumatic Loading Unit—on cotton slasher size box—speeds up process with better product uniformity. Gives precise loading, quickly applied and released. Ideal for new types of roll coverings.



CYLINDER-TYPE Pneumatic Loading unit—on final 15-ton squeezer of a crabbing machine—obtains maximum extraction with excellent uniformity and least wear on roll covering.

HERE'S an opportunity to bring the control of roll pressures in your mill up to date—at relatively low cost! Two new, improved Foxboro Pneumatic Loading units not only are inexpensive to install, but their greater efficiency reduces air requirements and maintenance. Readily interchangeable with previous models of corresponding types, or may be easily installed on unequipped rolls. Outstanding features of the two types are:

Diaphragm Type. *The new Foxboro Type M Stabilflo Air Motor with spring lift permits roll pressures up to 5 tons total load when direct connected—with less than 75 lbs. air. Other advantages include easy installation, low first cost and low operating cost.*

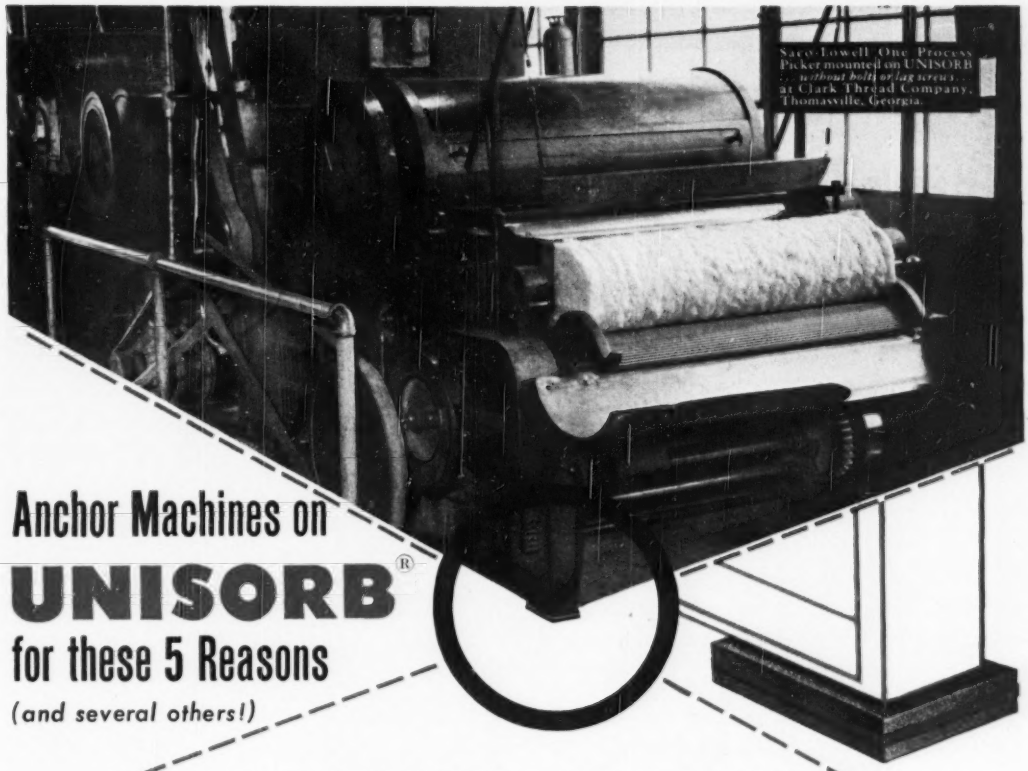
Cylinder Type. *The new Foxboro Stabilload Air Cylinder, designed for installations requiring longer strokes and higher roll pressures, sets an entirely new standard of performance. It features the air-saving, free-acting Block-Vee Seal for both piston and rod. Steel cylinder walls are honed, chrome-plated and polished, for corrosion resistance and low friction. Previously-installed cylinder units may be modernized simply by buying new piston and rod with Block-Vee Seals.*

These improved Roll Loading Units have been thoroughly proved by exacting field tests. Wherever they've replaced older models, they're paying for themselves in air and maintenance savings alone . . . as well as in greatly improved processing. Write for detailed information. **The Foxboro Company, 84 Neponset Ave., Foxboro, Mass., U.S.A.**

Typical applications of Foxboro Pneumatic Loading for squeeze rolls

Raw stock scouring	Continuous bleaching	Crabbing machines	Calenders
Open width scouring	Continuous mercerizing	Water mangles	Backwashers
Rope scouring	Acid carbonizing	Wet-out boxes	Fulling mills
Dye padders	Wash boxes	Embossing Rolls	Crush rolls
Slasher size boxes	Chemical padders	Peralta machines	

FOXBORO REG. U. S. PAT. OFF. **PNEUMATIC LOADING**



Saco-Lowell One Process Picker mounted on UNISORB . . . *without bolts or lag screws* . . . at Clark Thread Company, Thomasville, Georgia.

Anchor Machines on UNISORB® for these 5 Reasons

(and several others!)

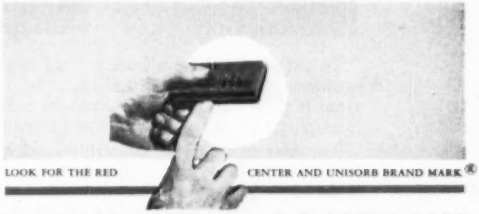
Fast, Easy, Thrifty Installation. UNISORB machine-mounting requires no bolts, no lag screws. A special cement binds the UNISORB pads to machine feet and flooring of any type — firmly, surely, with a surplus of holding strength.

Floors Preserved and Protected. Because UNISORB banishes old-fashioned bolt-and-lag-screw methods, destructive floor-drilling is no longer necessary for safe, secure anchoring.

No Mounting Maintenance. UNISORB requires none of the periodic bolt-tightening and other maintenance to which you've been accustomed. Not harmed by oil or grease. And UNISORB lasts *for years and years and years!*

Vibration and Noise Reduced. This proven, up-to-date method cuts transmitted machine vibration and noise up to 85% — reduces wear and tear on machines, floors, building . . . as well as giving a boost to morale and efficiency by providing quieter working conditions.

Greater Production Often Possible. By greatly reducing vibration, UNISORB frequently permits faster machine speed operation . . . often pays for itself with this advantage alone!



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NAME ..... **TITLE** .....

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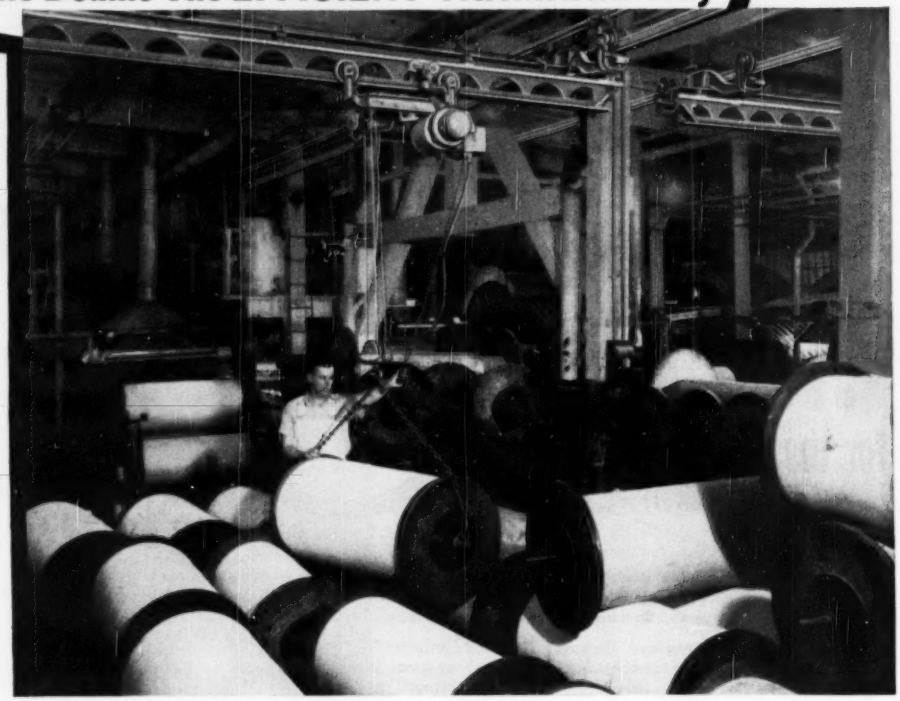
CITY ..... **STATE** .....

it is Easier, Faster, Safer to Handle Beams The EFFICIENT TRAMRAIL Way



To withdraw a beam from a tight spot is no problem when Cleveland Tramrail equipment is provided. Nor is it much of a task to transport and place it wherever required.

Transfer bridges, as illustrated above, are one of various types of Cleveland Tramrail handling equipment. They provide handling service for the entire area of each of the bays in which they operate. Because they can be interlocked to stationary rail spurs, loads can be transferred from one bridge to another, or to a track and switch system, and delivered from any point in one bay to any point in another without rehandling.

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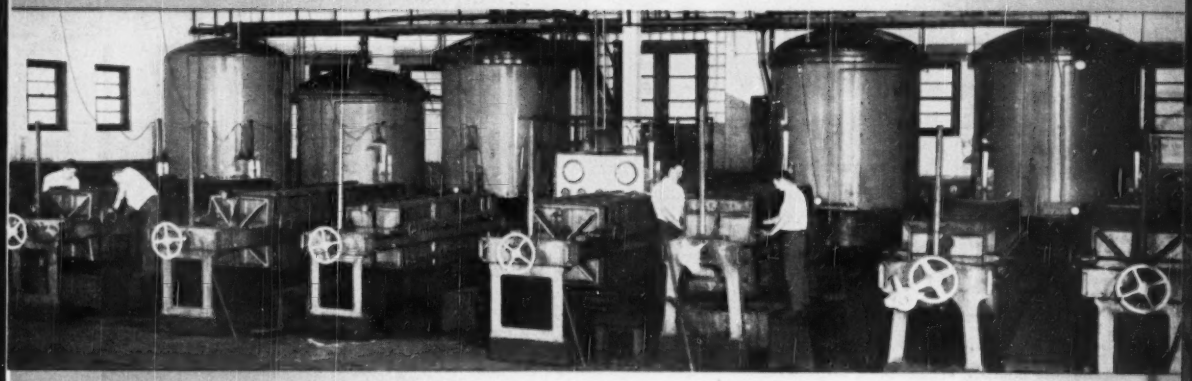
OVERHEAD MATERIALS HANDLING EQUIPMENT

non-corrosive, modern presses
eliminate rust
to give you a **superior product**



Here at Althouse, non-corrosive, modern presses, plus other built-to-order equipment (such as special metal fittings, valves, pumps made of Hasteloy C) are used, so that our dyestuffs NEVER come in contact with any Corrosive Metals while in the wet stage. This PRECISION Dye-Making *eliminates* the Dyers' Enemy Number One . . . CONTAMINATION. Althouse superior dyestuffs enable YOU to produce a superior product!

ALTHOUSE
Chemical Company, Inc.
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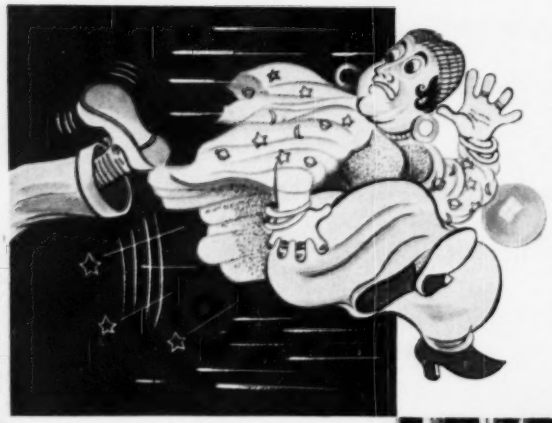


You don't need a gypsy...

to foretell the future of this compressor!

Consider the evidence:

Gardner-Denver AA Compressors are known throughout the world for continuous service under all operating conditions.

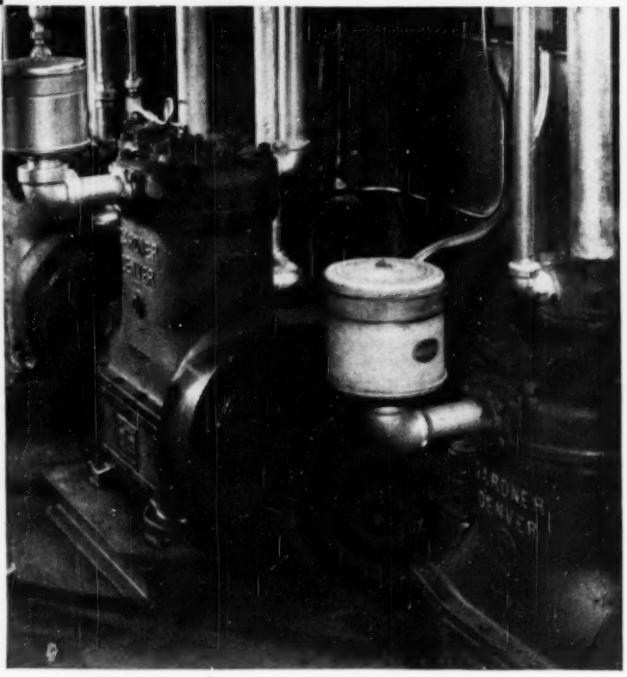
Look into the design:

Gardner-Denver AA Compressors are built to last, with quality features such as generous bearing areas, extra large water jackets and force feed lubrication.

You can safely predict:

A Gardner-Denver AA Compressor installed in your plant will assure a dependable source of compressed air for years to come — will save you money every year — on both operation and maintenance.

Write today for complete information on AA service records and construction features.



Gardner-Denver AA Vertical, Single-Stage, Water-Cooled Compressor. Capacities from 32 to 183.6 cubic feet displacement per minute.

Since 1859

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COCKER
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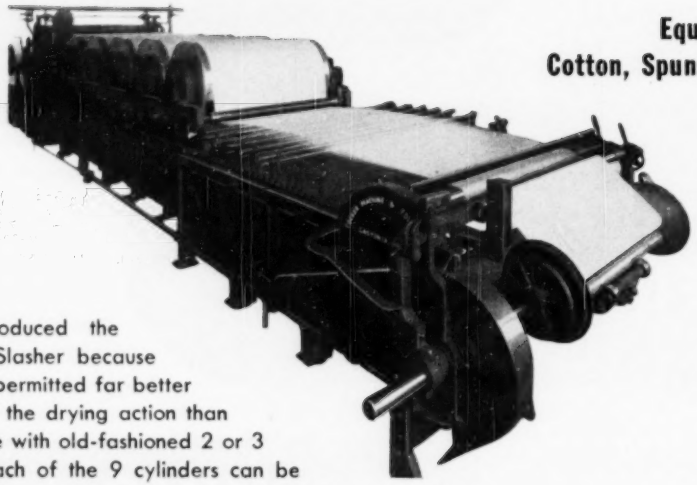
Gradual Drying Is Best

The Cocker 9-Cylinder High Speed Slasher

Equally Efficient on Cotton, Spuns, and Filaments



Cocker introduced the 9-Cylinder Slasher because 9 cylinders permitted far better control over the drying action than was possible with old-fashioned 2 or 3 cylinders. Each of the 9 cylinders can be set at a different temperature if desired and each has accurate controls which automatically maintain exactly the correct degree. The result is a far more uniformly dried warp and far less down-time in slashing and weaving operations.

Heavier construction, perfectly balanced parts and more flexible controls permit continuous high speed operation with a minimum of vibration, wear, and down-time. Easily accessible parts permit simplified maintenance.

Get full information on this high speed machine. Or if you prefer to install a 9-Cylinder unit between your present front and back sections, let us show you how this can be done. For better warps, higher production, and simplified operation, write or wire today.

Cocker Machine and Foundry Co., Gastonia, N. C.

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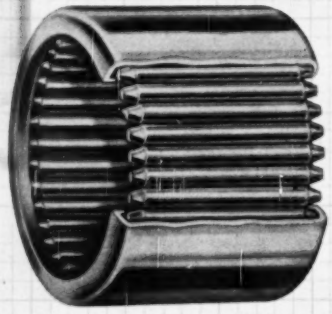

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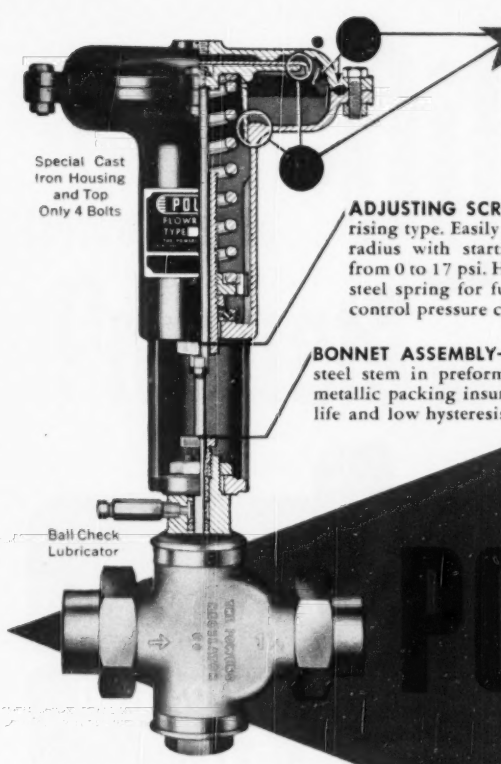

VALVE TOP—Durable moulded neoprene diaphragm (A) has positive sealing bead which provides increased sealing action with increasing control pressure. Efficient diaphragm form insures ample and constant operating power thru full travel. Piston Plate Assembly (B) has a free floating thrust plate which absorbs side thrust. Closely guided piston plate maintains stem in accurate alignment.

ADJUSTING SCREW—Ball bearing non-rising type. Easily accessible, 180° turning radius with starting pressure adjustable from 0 to 17 psi. Has enclosed rust proofed steel spring for full travel in 5 or 10 psi. control pressure change.

BONNET ASSEMBLY—Polished stainless steel stem in preformed lubricated metallic packing insures long life and low hysteresis.

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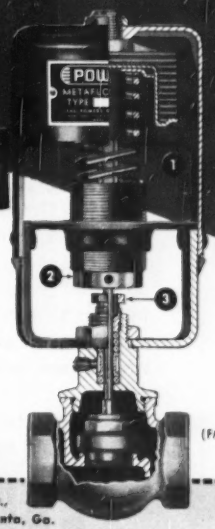
POWERS F and M AIR OPERATED CONTROL VALVES

VARIETY of VALVE BODIES—Sizes ½" thru 8"

For line pressures up to 250 lbs. per square inch. Rugged construction to withstand piping strains. Single seat or double seat, bronze and stainless steel trim. Double unions and flanged ends. Available normally open (direct acting) or normally closed (reverse acting) and 3-way mixing type valves.

POWERS **ETAFLOW** VALVE



(FM2)

POWERS *Metaflow Valves* are small, sturdy, lightweight, reasonably priced, suitable for many control applications where the pressure differential does not exceed 75 lbs. per square inch.

SPECIFICATIONS

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2. **ADJUSTING SCREW**—Brass with rust proofed steel spring having 15 lbs. adjustment range to give proper sequence operation where required

3. **BONNET ASSEMBLY**—Polished stainless steel stem in preformed lubricated metallic packing insures long life and low hysteresis.

VALVES—Sizes: ½" thru 2", bronze bodies with screwed ends, maximum body pressure 125 lbs., rugged construction to withstand piping strains. Stem lubricator, optional.

TRIM—Composition disc with brass integral seat and self-aligning disc holder. Available normally open (direct acting) or normally closed (reverse acting), and 3-way.

METAFLOW PACKLESS VALVES prevent leakage of inflammable or harmful liquids or gases and provide vacuum protection. Are suitable for use with Freon, oil, gasoline, non-corrosive gases, hot or cold water and low pressure steam

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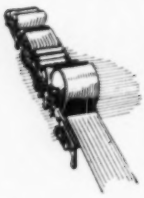

Be sure to stop in the Staley booth when you're in Greenville the week of October 2. If you just want to say "hello," that's fine. If you want to talk over any of your current or future problems concerning starch, we'll be glad to give you the benefit of our 30 years' experience of working hand in hand with the textile industry. We'll be seeing you!

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A Complete Line of Modified and Unmodified Corn Starches that Guarantee Uniform Sizing, Better Weavability and Improved Finishing.

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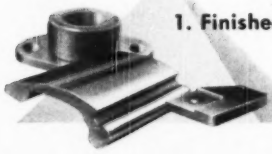
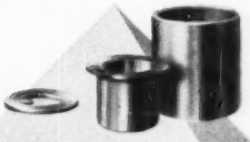
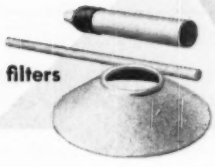




2. Heavy-duty oil-cushioned, self-lubricating bearings

3. Permanent filters



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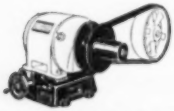
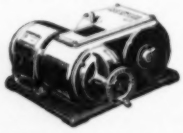
VARIABLE SPEED TRANSMISSION for providing infinite, accurate speed flexibility over a wide range—2:1 to 16:1. Sizes—fractional to 87 hp.



VARI-SPEED MOTOR PULLEY provides an instantly variable speed drive within 4:1 ratio for any constant speed motor. Sizes to 10 hp.



MOTODRIVE combines motor, speed varying mechanism and reduction gears in a single unit. Speed variations 2:1 to 6:1 inclusive. Sizes to 20 hp. (Also available in fractional hp sizes with speed variations of 10:1.)

• The new REEVES Vari-Spin Drive absolutely eliminates the down-time and trouble ordinarily necessitated by changing belts and pulleys to change cylinder speeds.

With REEVES Vari-Speed, cylinder speeds are quickly and easily changed merely by turning a speed shifting screw—without stopping the frame or interrupting production. And, *always*, the speed set is accurately and positively maintained.

Vari-Spin Drive is infinitely adjustable within its range of 2.75:1. Fine gradations in speed compensate for excessive tension and varying conditions in humidity and temperature; and for changes in yarn size. Because the drive is *truly positive*, a return to within a fraction of an rpm of any previous cylinder setting is assured.

Send for *free* bulletin giving full details on the REEVES Vari-Spin Drive—see how easy it is to obtain production increase and top efficiency with REEVES Vari-Spin. Write for Bulletin No. T52-3N.

NOTE: See your REEVES representative at the Southern Textile Exposition, Greenville, S. C., October 2-7: SPACE No. 247-C.

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Recognized Leader in the Specialized Field of Speed Control Engineering

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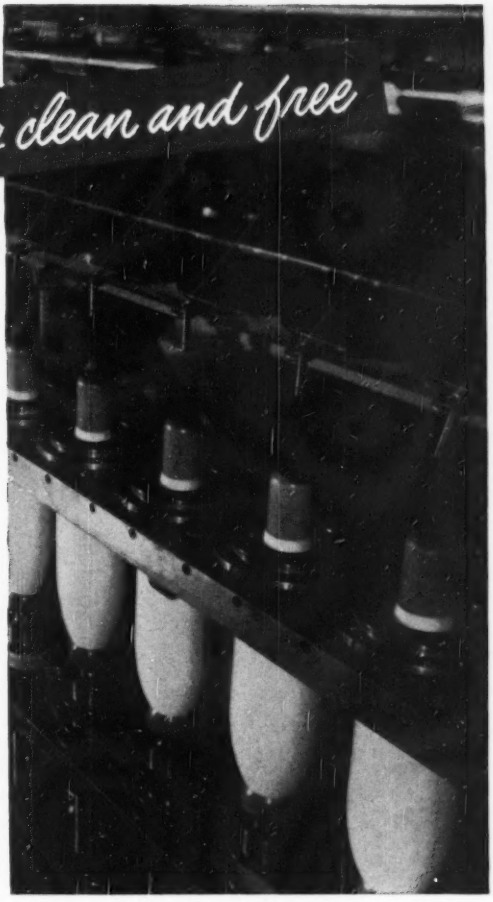
Keep them spinning clean and free

with

Gulfspin



an outstanding new oil that reduces friction, wear, and cleaning costs

Gulfspin keeps spindles remarkably clean—much cleaner than ordinary spindle oils. Here's why: Gulfspin is not only highly resistant to the formation of sludge but also has the remarkable ability to prevent sludge from depositing on blades and bolsters. Result: reduced cleaning costs and end breakage.

Gulfspin has excellent load carrying characteristics which insure against excessive wear in cast iron bolsters. This means freedom from spindle wobble and lower maintenance expense.

This quality oil helps reduce starting torque in spindles, and it does not increase in viscosity even after long service. Thus power consumption is kept at much lower levels than are possible with ordinary spindle oils. And it helps protect spindle parts against rust.

Users of Gulfspin report a complete absence of sludge deposits and absolutely no increase in power consumption after months of service. See for yourself on your frames — that this new spindle oil is better in every way. Write, wire, or phone your nearest Gulf office and ask a Gulf Lubrication Engineer to call.

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Refined from the highest grade crudes, Tycol lubricants are exceptionally resistant to breakdown which means greater economy . . . longer machine life for every type of equipment.

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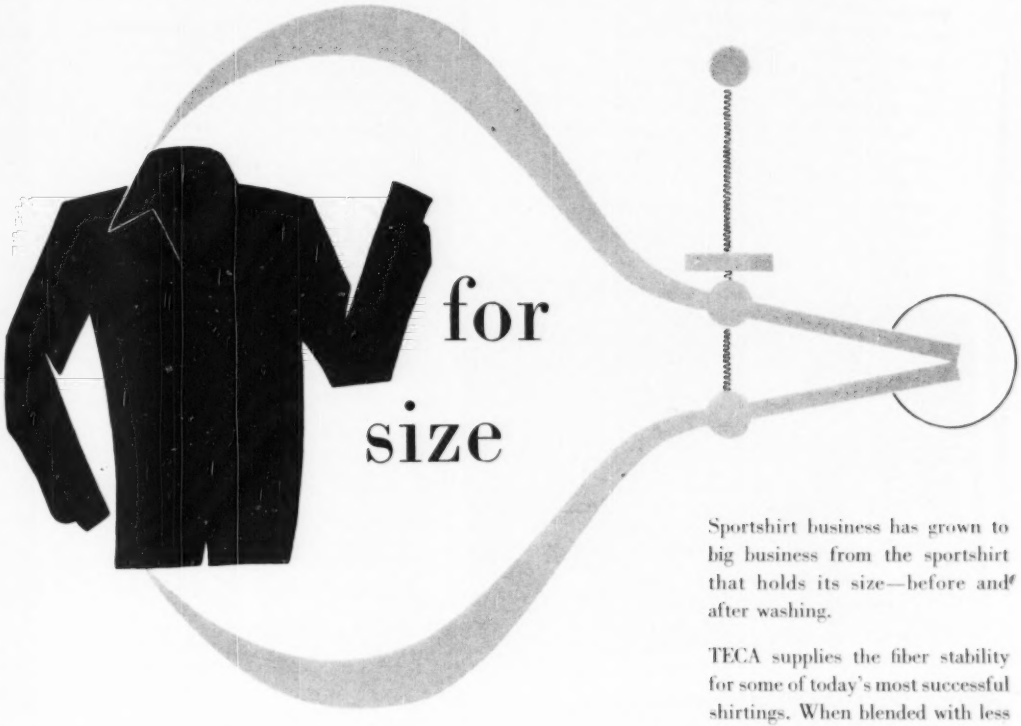

for size

Sportshirt business has grown to big business from the sportshirt that holds its size—before and after washing.

TECA supplies the fiber stability for some of today's most successful shirtings. When blended with less stable fibers in spuns, TECA acts as a natural control, minimizing shrinking and stretching.

Alert shirtmakers specify fabrics woven with percentages of TECA fiber. Alert retailers capitalize on the TECA fiber trade-mark—featured above all others in the sportshirt field.

For information about TECA, consult A. M. Tenney Associates, Inc., 10 East 40th Street, New York 16, sales representatives for Tennessee Eastman Corporation.

Tennessee Eastman Corporation

(Subsidiary of Eastman Kodak Company)

KINGSPORT, TENNESSEE

* *Teca is an Eastman trade-mark. It identifies a short crimped fiber made by Eastman from cellulose acetate—a fiber otherwise known as estron or acetate rayon staple.*

Proof! →

We don't know of any better way of convincing you of the successful results to be obtained from Amco Ductless Humidification and Cooling than to give you the names of well known mills that have installed these systems since 1944.

Amco offers both ductless and unit duct systems of humidification and cooling and also central station air conditioning. An Amco engineer will give you unbiased advice on the system best suited to your requirements.

Typical Installation of an AMCO Ductless Humidification and Cooling System.

Alabama
Alabama Mills, Inc.
Avondale Mills
Micolas Cotton Mills
Opp Cotton Mills
Pepperell Mfg. Co.
Russell Mfg. Co.

Arkansas
Pinecrest Mills

California
California Cotton Mills

Connecticut
Aldon Spinning Co.
American Thread Co.
Broad Brook Co.
Cluett, Peabody & Co.
Hartford Rayon Corp.
Ponemah Mills
Powdrell & Alexander Inc.
Wauregan Co.

Georgia
American Thread Co.
Canton Cotton Mills
Clark Thread Co.
Columbus Mfg. Co.
Exposition Cotton Mills
Fitzgerald Cotton Mills
Flint River Cotton Mills
Goodyear Clearwater Mills
Mary-Leila Cotton Mills
Moultrie Cotton Mills
Muscogee Mfg. Co.
Pacolet Mfg. Co.
Pepperell Mfg. Co.
Royston Cotton Mills
Stevens, M. T. & Sons Co.
Strickland Cotton Mills
Swift Mfg. Co.
Union Mfg. Co.

Maine
Cotwool Mfg. Co.
Verney Corp.

Massachusetts
Arlington Mill
Chicopee Mfg. Corp.
Hathaway Mfg. Co.
Skinner, William & Sons
Wamsutta Mills
Paul Whitin Mfg. Co.

New Hampshire
Chicopee Mfg. Co.
Jaffrey Mills
Pembroke Mill
Textron Inc.

New Jersey
New Jersey Worsted Mills

North Carolina
Cannon Mills Co.
Cone Mills Corp.
Equinox Mills
Fieldcrest Mills
Henderson Cotton Mills
Juilliard, A.D. & Co.
Marion Mfg. Co.
Mooresville Mills Inc.
Pee Dee Textile Co.
Pickett, Hannah Cotton Mills
Rocky Mount Mills
Rosemary Mfg. Co.
Spatex Corp.
Stanley Mills, Inc.
Tuscarora Cotton Mill

Pennsylvania
Williamsport Textile Co.

Rhode Island
Almardon Mills
American Silk Spinning Co.
Argonne Worsted Co.
Falls Yarn Mills
Lonsdale Co.
Lorraine Mfg. Co.
Owens-Corning Fiberglass Corp.
Warwick Mills
Woonsocket Worsted Mills

South Carolina
Beaumont Mfg. Co.
Graniteville Co.
Harmony Grove Mills
Henrietta Mills
Jackson Mills
Judson Mills
Laurens Cotton Mills
Monarch Mills
Piedmont Mfg. Co.
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Texas
Bonham Cotton Mills
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HUMIDIFICATION and COOLING

American Moistening Company
Affiliated with Grinnell Company Inc., Providence, R. I.
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Get this story of two machines in one

Here is a story in words and pictures about the new dual-purpose Turbo AD-48—for preboarding or finish boarding, or a combination of both. See how the circulating hot air keeps temperatures steady during boarding . . . assures static-free stockings perfectly finished. Read about the automatic timing device which governs the precise preboarding operation.

Study the performance of this new Turbo AD-48—fast, quiet, automatic, gentle as a lamb with your finest Nylons. Production rating per machine—120 to 130 dozen pairs per 8-hour day. Write for the Turbo AD-48 folder today.

TURBO MACHINE COMPANY
LANSDALE, PENNSYLVANIA
Southern Representative: F. W. Warrington Co., Charlotte, N. C.

Easy, Simple,

Two groove *Vari-Pitch* Automatic drive on Whitin Twisters. Power is supplied by two 10 hp *Quick-Clean* motors made by Allis-Chalmers.

Low Cost SPEED CONTROL

EASY to install, goes on like standard V-belt drive. EASY to use, one hand makes all adjustments while machine is running. SIMPLE because all mechanism is inside one sheave. LOW COST because standard components are used.

Get All These Other Advantages, Too

Multiple belt design means greater dependability, greater safety factor, longer belt life, silent operation. No need for artificial stiffening devices. If one belt breaks, others operate until replacement.

Belt tension stabilizer gives slightly under starting load to provide smooth, cushioned start. Belts absorb vibration and shocks to reduce thread breakage.

Compare the *Vari-Pitch* Automatic drive with any other speed changing method. Check its economical first cost . . . low maintenance . . . simplicity of installation and operation.

Vari-Pitch Automatic drives are available from 1 to 40 hp. Rated horsepower is conservative for long belt life. Top speed is 100% higher than low speed. Complete drive consists of *Vari-Pitch* Automatic sheave, companion sheave, *Texrope* V-belts, standard motor and adjustable motor base.

Full Line of V-belt Drive Equipment

You can get everything you need for V-belt drives . . . new and replacement *Texrope* standard and wide range belts; standard and wide range *Vari-Pitch* sheaves; *Magic-Grip* sheaves; stock and non-stock sheaves; and Speed Changers from one reliable source. For details on the many Allis-Chalmers products that reduce costs in textile mills, see your nearest A-C Authorized Dealer or Sales Office.

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Texrope, Vari-Pitch, Quick-Clean and Magic-Grip are Allis-Chalmers trademarks.

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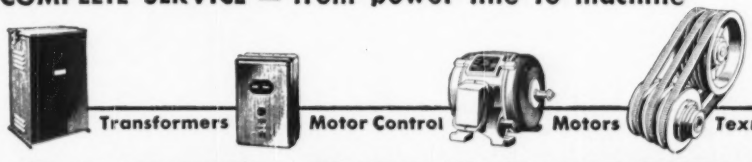
COMPLETE SERVICE — from power line to machine



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Originator of the Multiple V-Belt Drive for the Textile Industry

Are you using the best starches for your purpose?*

*Full technical service, without obligation, is available to help you profit from the use of a starch "tailor-made" for your particular production problem.

In addition to technical service, we maintain continuing research in the field of starch chemistry, under the direction of the foremost research men in this field.

Basic research and technical service are two facilities maintained to serve you better. For uniform quality products . . . for a reliable source of supply . . . depend on Corn Products Refining Company.

CORN PRODUCTS REFINING COMPANY

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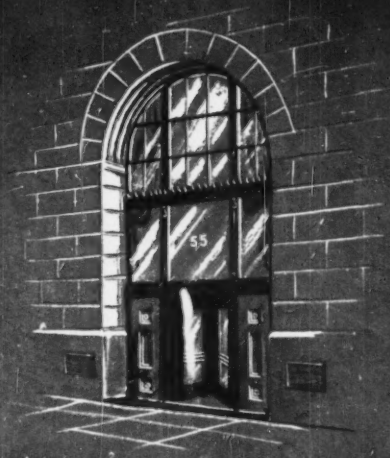

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Corrosion resistance is only half the story

Stainless Steel is *extra tough—hard to dent*

it's a *natural* for textile mills

One large mill cut replacement costs **75%** by making these acid-handling buckets out of Stainless Steel. They resist acid *and* rough handling.

WHEN most people think of Stainless Steel, they think about its remarkable corrosion resistance. That's only natural, because Stainless equipment is best known for its ability to repel chemical attack from such materials as acid dope, water vapor, viscose solutions and corrosive dyestuffs.

But don't forget the *physical* properties of Stainless Steel: It's hard. And it's tough. It withstands rough treatment that would absolutely ruin other materials. That's why you see it being used so much for drums, buckets and other containers that must be manhandled constantly.

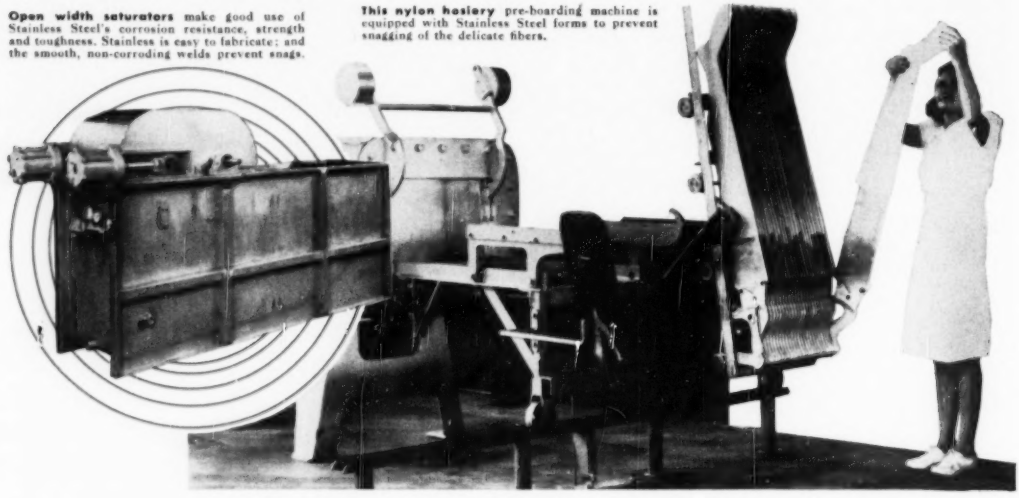
Stainless Steel also has two properties that are vital for parts that must come into contact with moving yarns. Stainless is so smooth that it will not snag even the most delicate filament rayons. And the great wear resistance of Stainless means it can withstand the cutting action of yarn better than almost any other metal.

When you think about these factors—the wear resistance, toughness, smooth surface finish and the great ability to withstand corrosion—it's easy to understand why Stainless Steel is preferred for every phase of the textile industry, whether fiber manufacturing, spinning and weaving or dyeing and finishing.

Your fabricator probably uses U·S·S Stainless Steel now, it's so perfect in finish, so uniform in composition. On your next equipment order, specify "U·S·S Stainless preferred." That way, you'll be sure of Stainless at its very best.

Open width saturators make good use of Stainless Steel's corrosion resistance, strength and toughness. Stainless is easy to fabricate; and the smooth, non-corroding welds prevent snags.

This nylon hosiery pre-boarding machine is equipped with Stainless Steel forms to prevent snagging of the delicate fibers.



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SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

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UNITED STATES STEEL

Get your production
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...with a W&G
"Feldlock"
Type 700C and 730C
THE DUPLEX FOOT UNIT, an exclusive W&G feature, is provided with a flexible heel and toe arrangement that "walks" easily over bulky cross seams, without raising the foot or skipping stitches. This added flexibility enables the "Feldlock" to handle a wide variety of materials—for such operations as under arm felling on work shirts, out seams on work pants and overalls, sportswear, upholstery, playsuits, uniforms and many other garments.

Owners and operators the world over recognize the "Feldlock" as the standard of quality and performance for tubular seaming operations and lap seam felling on light or medium weight fabrics. It's strong enough to withstand the punishment of continuous, high-speed operation—yet delicate enough for precision seaming of fine silk undergarments.

The features listed at the right are just a few of the reasons why the "Feldlock" is a real time-saver on any job. Available with two or three needles, producing two or three rows of U.S. Standard Stitch Type 401. Send coupon below for complete information.

OTHER "FELDLOCK" FEATURES

- Automatic, Force-Feed Lubrication
- Feed-Off-The-Arm Design
- Roomy Work Clearances
- Comfortable Working Position
- Single Solid Base
- Self-Setting Needles
- Pivoted Looper Holders
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Please send me a copy of Bulletin 896 on the W&G "Feldlock" machine.

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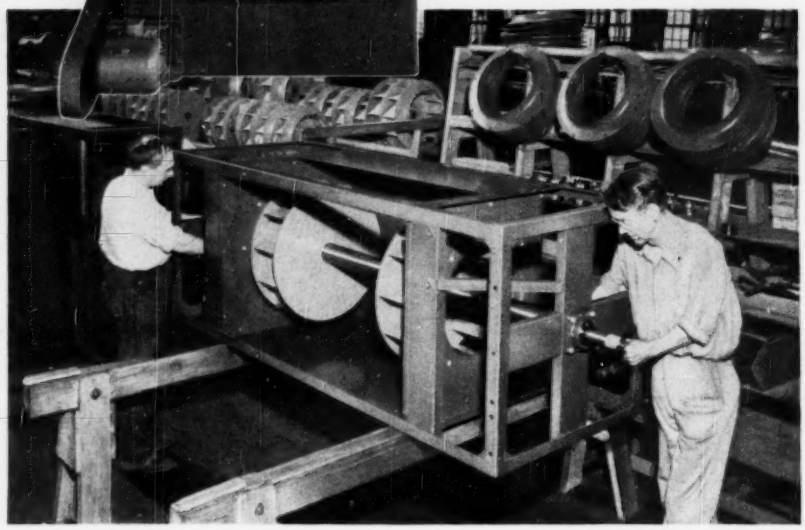
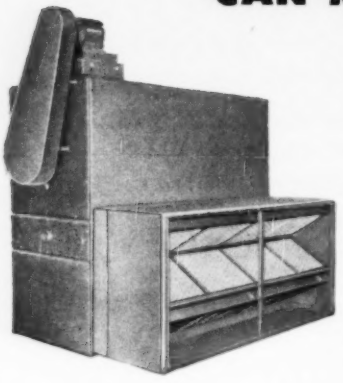
AH Unit

AH fan section being assembled



no other air handling unit

CAN MATCH ALL THESE FEATURES



AV Unit

Superior, rugged construction and sound engineering have brought wide acceptance to Westinghouse Air Handling Units. What's behind this record . . .

1. CONSTRUCTION—Sectionalized casings have welded, gusseted structural angle frames, half-inch rigid internal insulation. Rotating parts are heavy and rugged. Result—Non-distortion in shipping, easier assembly, smooth operation, better appearance, lower maintenance costs.

2. FLEXIBILITY—Westinghouse sectionally designed components—fans, heating and cooling coils, filters, mixing boxes, bases and drains—can be assembled for any air handling operation. Result—Installations "tailor-made" to your particular job requirements.

3. PERFORMANCE—Westinghouse Silentvane fan wheels are known for their stable non-pulsating air flow, silent operation, and non-overloading horsepower characteristics. Result—Long, trouble-free service life.

Behind these important features is the UNDIVIDED RESPONSIBILITY of Westinghouse for *every* major part. No other manufacturer today offers this "plus" value. For complete information on how Westinghouse Air Handling Units—either Type AH (Horizontal) or Type AV (Vertical)—will meet your needs, contact your local Sturtevant office, or write to Westinghouse Electric Corporation, Sturtevant Division, Hyde Park, Boston 36, Massachusetts.

YOU CAN BE SURE...IF IT'S

Westinghouse

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for Unusual color effects

on any fabric for any purpose,
let National Technical Service
suggest a low-cost combination of

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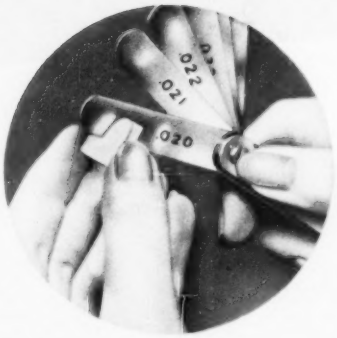
A NEW FEATURE!



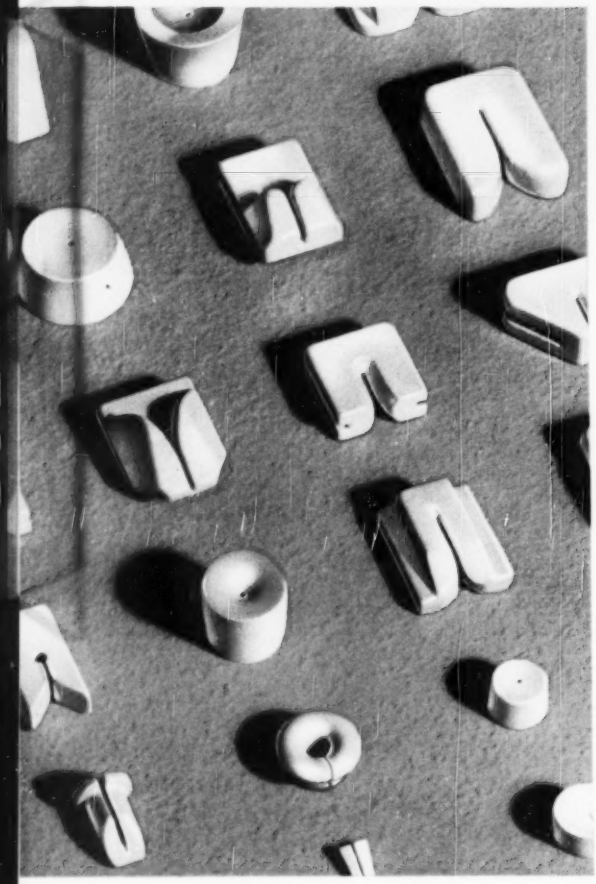
Polished Slots

as narrow as .020" wide are practical in

ALSIMAG®

U. S. PATENT NO. 2,216,703 AND OTHER CLAIMS PENDING

CROTCH GUIDES and SLOTTED INSERTS!



Now you can have closer control over fine denier yarns!

These narrow slot AlSiMag guides give you better control, faster processing, improved quality.

In package winding, it has been found that these narrow, polished slot, AlSiMag guides give perfect control in the reversing of the traverse arm. Loop-overs on the ends of the packages have been eliminated.

Many other processes can be improved with AlSiMag guides or inserts with these narrow slot designs which are usually practical ONLY IN ALSIMAG.

AlSiMag narrow, polished slot guides and inserts have been in daily use in a number of mills for more than a year. Their advantages are definitely proven in actual mill operations.

Test samples to your design can be furnished promptly and at reasonable cost. If your process requires a polished slot even narrower than .020", consult our engineers. Experiments with this newly available feature may show you the way to make substantial savings.

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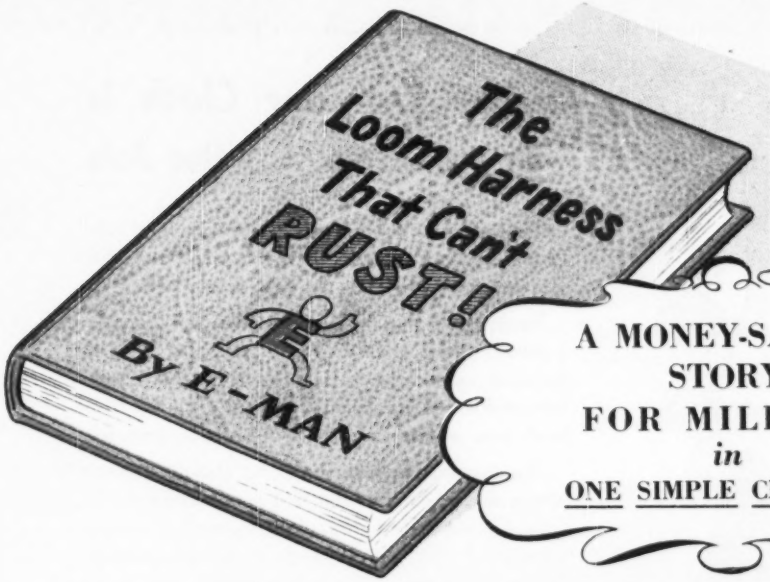


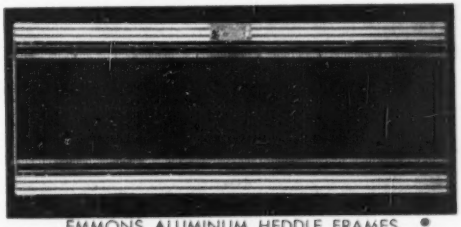
A MONEY-SAVING STORY FOR MILLMEN *in* ONE SIMPLE CHAPTER!

Here's THE HARNESS.....

Here's THE STORY...

For as long as there have been weave rooms RUST has taken a costly toll in cloth seconds, extra finishing headaches and weaving slow-downs. Now all that expense is in the past. Emmons has developed a complete harness that lives in heat and moisture like a duck lives in water . . . naturally. Mills using the Emmons Rust-Proof Harness report important savings in loom operation . . . these savings *should* be yours and *can* be yours with the Emmons Rust-Proof Harness!

Here are "plus" advantages in the new Emmons Rust-Proof Harness—Extra Frame Rigidity With Reduced Distortion, Free Sliding Heddles and Greatly Reduced Heddle and Yarn Breakage—Heddles With A Low Coefficient of Friction To Aid in Weaving—Easy Heddle and Reed Cleaning—Less Reed Dent Breakage—MUCH LONGER LIFE FOR THE ENTIRE HARNESS!



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Tuffer Cylinder Cloth is "Engineered" for the Job

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To do this properly it must have great strength, it must be thick enough to give vertical support to the wires, and too, must be flexible enough to permit some wire displacement and yet draw the wire back into position when the pressure is removed.

The complete satisfaction of our customers, year after year, is proof indeed that our patented 4-ply Tuffer Cylinder Cloth does its job exceedingly well. It positively will not separate under severest use. A careful examination will convince you of its superiorities. There's no better foundation made than TUFFER CYLINDER CLOTH.

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Southern Plants: Atlanta, Ga. and Gastonia, N. C.

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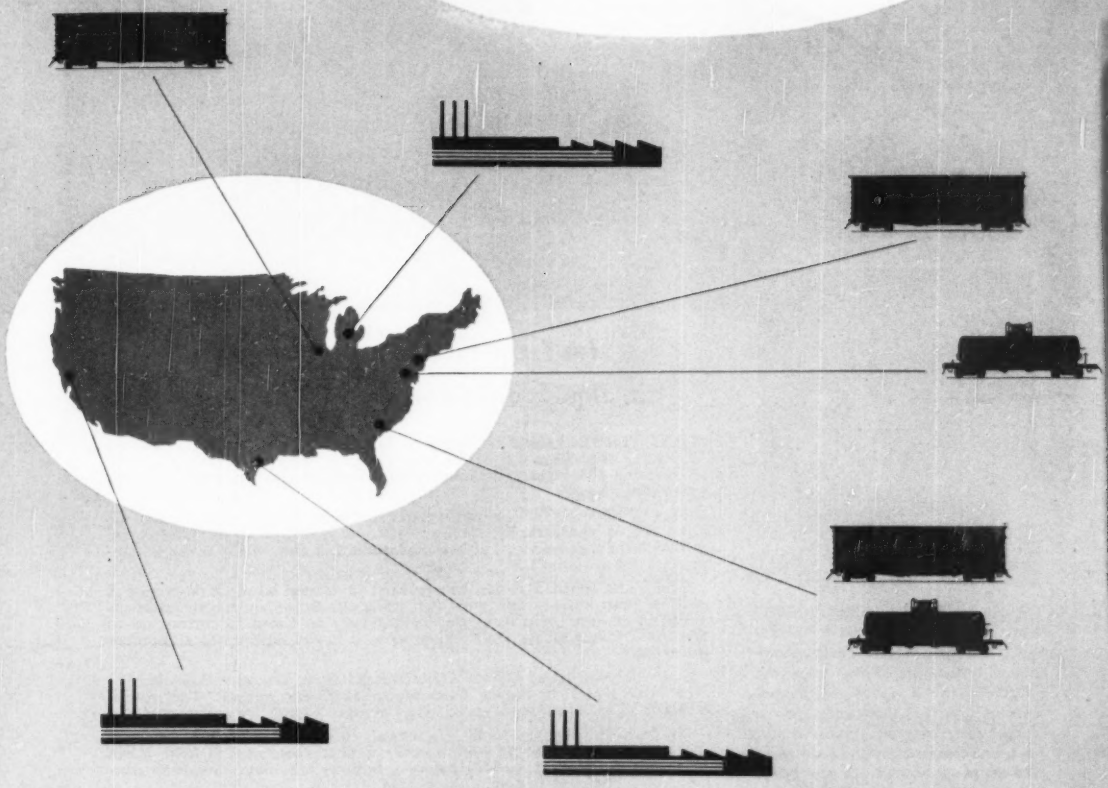

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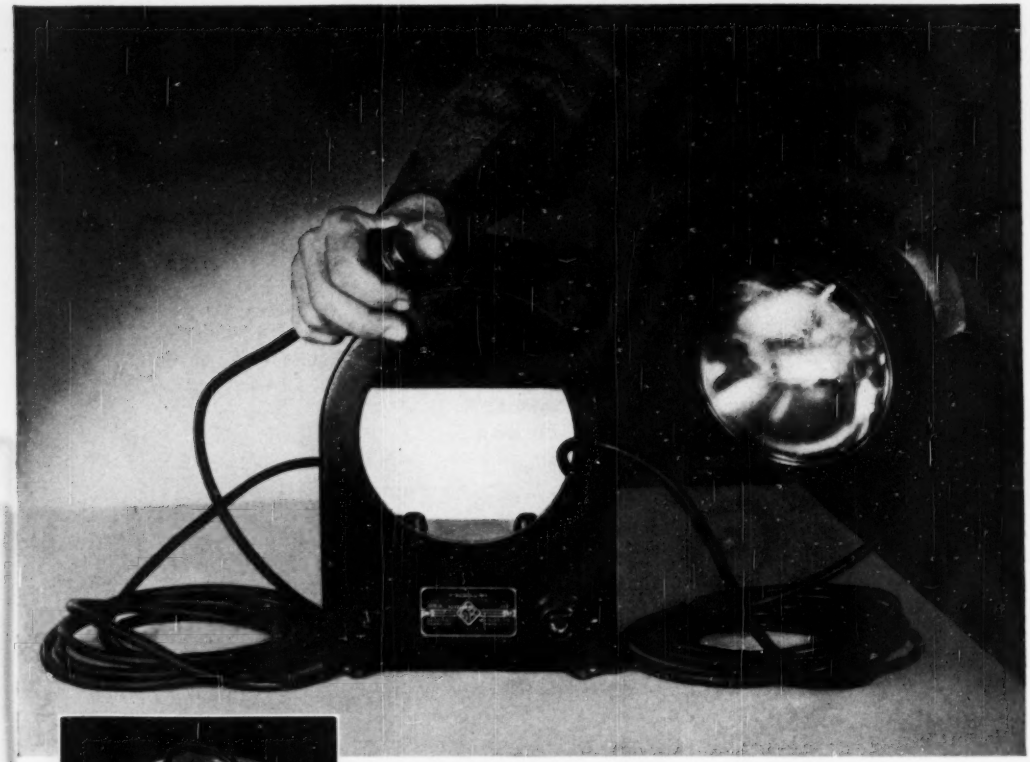

The Type 631-BL STROBOTAC has a flashing rate of 60 to 14,400 flashes per minute. It is the auxiliary control instrument to use when the STROBOLUME is to be flashed continuously. It is lightweight, portable and completely self-contained and has a dial which is calibrated in rpm.
TYPE 631-BL STROBOTAC . . . $155.00.

WRITE FOR YOUR COPY OF
"THE STROBOLUME BULLETIN"

for Extra HIGH Light Intensity
in Slow-Speed Stroboscopic Applications

THE STROBOLUME is designed to give an extra-brilliant, short-intensity stroboscopic light for observation of very slow-moving objects or machine operations . . . much slower than can be observed with our other Stroboscopes.

The STROBOLUME is particularly suited to single- or multiple-flash stroboscopic photography, having a flash duration of approximately *ten millionths* of a second . . . about *one-twentieth* of that of the average commercial "speed lamp".

The STROBOLUME can be operated in several ways. It is equipped with a push-button and cord for firing at finger-controlled intervals. With an external contractor its flashing may be timed to correspond to the speed of a rotating shaft. When so used it will flash up to 1200 times per minute.

A special slow-speed STROBOTAC® is available for operation with the STROBOLUME at flashes from 60 to 1200 per minute. The special STROBOTAC alone has a speed range of 60 to 14,400 per minute.

At flashing rates up to 45 per minute the STROBOLUME may be operated continuously. At other speeds, up to its maximum of 1200, it can be operated for short periods before a built-in automatic circuit breaker calls for a brief rest period.

Many new fields for the stroboscopic study of slow moving machines are opened to research, design and production with the STROBOLUME.
Price: $225.00

GENERAL RADIO COMPANY Cambridge 39, Massachusetts
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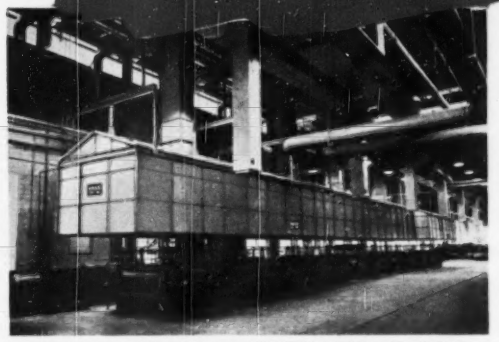
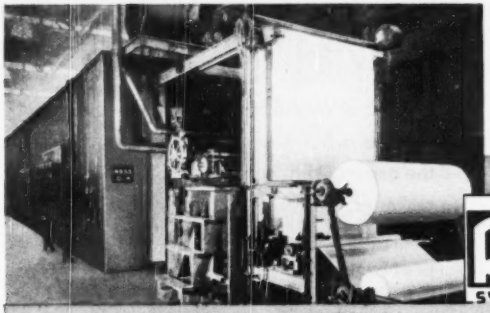
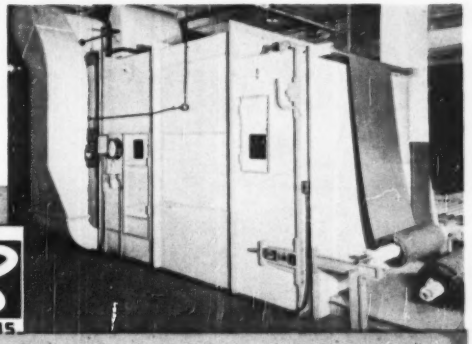
Here's how the industry uses CONTROLLED AIR *for heating, drying, cooling, ventilating*



Each new installation of the modern ROSS Air Systems throughout the textile industry further testifies to their effectiveness in achieving greater production efficiency and operating economies. They are fast becoming standard equipment for confining and removing vapors to speed drying, to prevent spoilage from condensation, to eliminate fog, to provide comfortably cooled working areas and similar requirements. ROSS engineers, with the longest experience in handling air problems, will gladly survey your requirements. Investigate the possibilities for your plant.





ROSS SYSTEMS

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Panel Constructed Hoods for dye jigs, dry cans, etc. . . . Vapor Absorption and Exhaust apparatus . . . Air Make-Up equipment . . . Roof Heating and Ventilating Ducts . . . Waste Heat Recovery Apparatus . . . Cooling Systems for aisles, motor generators, etc. . . . Room Air Conditioning . . . Drying Apparatus for coated, printed, saturated and similarly treated cloth and fabric.

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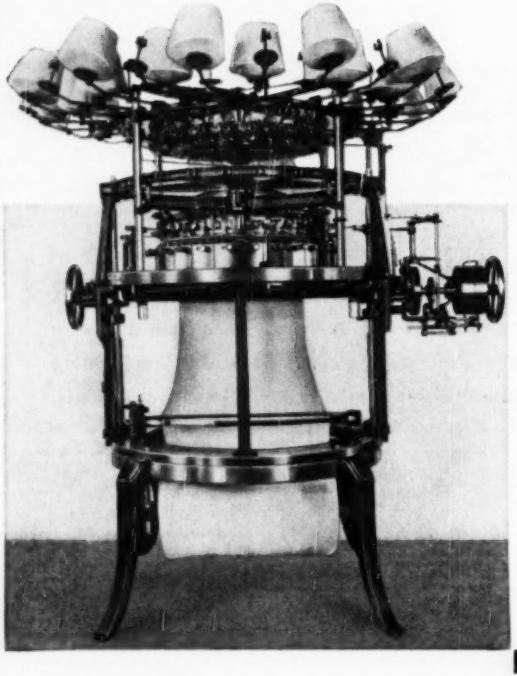
ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

A GREAT OAK...

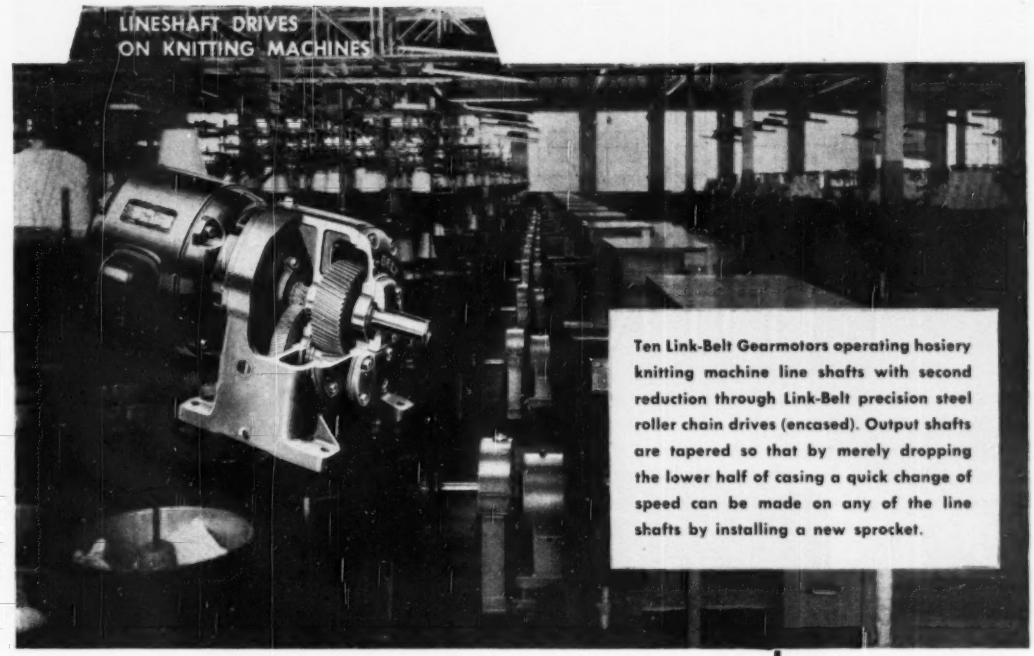


WE at Wildman have for many years manufactured standard machines that cover the general knitting field. SPECIAL PROBLEMS, however, frequently arise that require variations in design of detail. Our engineers are prepared to adapt these machines to accord with them.

•

The WILDMAN 30" INTERLOCK MACHINE for SPORTSWEAR, UNDERWEAR, DRESS FABRICS and OUTERWEAR, is an example of Wildman's versatility in production ... This machine is built in a special size frame to provide ample width in the take-up for the exceptionally wide fabric produced ... Popular sizes 26" and 30". Also other sizes from 15" up. Furnished in all cuts up to 24 needles per inch. Write for complete information.

WILDMAN MFG. CO. Norristown, Pa.



Ten Link-Belt Gearmotors operating hosiery knitting machine line shafts with second reduction through Link-Belt precision steel roller chain drives (encased). Output shafts are tapered so that by merely dropping the lower half of casing a quick change of speed can be made on any of the line shafts by installing a new sprocket.

Look to LINK-BELT for 3 ways to solve your speed reduction problems

There are various considerations in the selection of proper units for speed reduction. Is it ratio? Is it space? Is it shaft position? Is it shock loads?

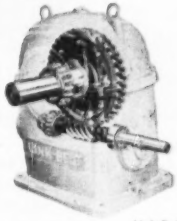
Whatever it is — LINK-BELT'S complete line of enclosed gear drives gives you the exact answer to your needs.

Our engineers advise you without being limited to an incomplete line. Their advice is yours without obligation.

Ask for Books 2247, 2419, 2324 for the complete answer to your speed reduction problems.

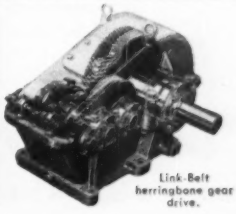
11,500-B

LINK-BELT enclosed gear drives



Link-Belt worm gear drive.

Link-Belt gearmotor.



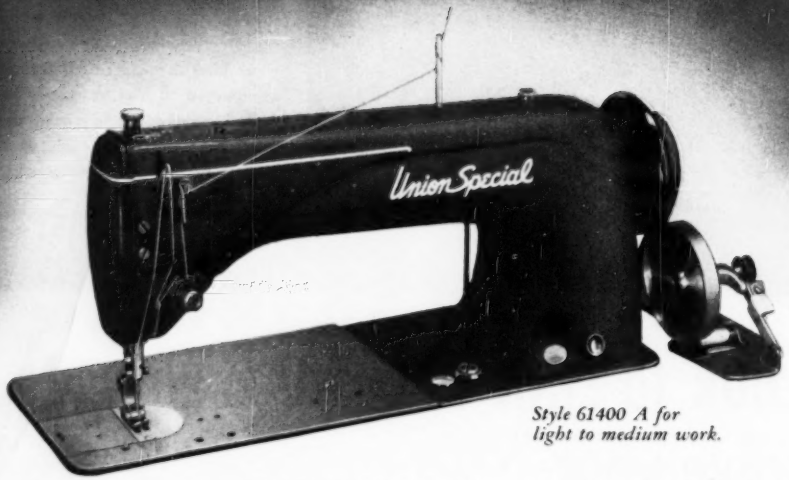
Link-Belt herringbone gear drive.

LINK-BELT COMPANY Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Johannesburg. Offices, Factory Branch Stores and Distributors in Principal Cities.

announcing...

UNION SPECIAL'S NEW

LOCKSTITCH



Style 61400 A for light to medium work.

HERE is Union Special's new LOCKSTITCH machine, Class 61400, for single needle, plain seaming operations. Thoroughly tested and proved in the field and now in regular production, it embodies numerous outstanding improvements over previous machines:

- **NEW FEED MECHANISM!** Specially designed to produce a smooth, symmetrical feed curve. Insures even feeding of materials—smooth, perfectly flat seams. Handles the lightest nylon, cotton, or rayon without feed marks or cutting.
- **PERFECT, UNIFORM STITCHING!** Stiffer needle construction results in highly uniform line of stitching. Improved hook timing provides better stitch control—greater freedom and ease in tacking. Less sensitive to foot lift variations.
- **SMOOTH, FAST, LIGHT RUNNING!** New, light weight parts make for smooth, effortless operation—fast starting and stopping—positive, yet gentle, feeding action.
- **TIME-SAVING ADJUSTMENTS!** Push button control for quick, easy adjustment of stitch length. New thread control tension allows full adjustment from outside the machine.
- **PRECISION BUILT!** Finest precision tooling used throughout to insure long life low maintenance, high quality.

Find out what the SIXTY-ONE-FOUR can do for you! See your local Union Special representative, or write.

Union Special® MACHINE COMPANY

407 NORTH FRANKLIN STREET • CHICAGO 10, ILLINOIS

even a child can *feel* the difference!

Soluble LUXOLENE D

THE SUPERIOR FINISHING OIL FOR FINE COTTONS, RAYONS, ACETATES

It's the rule of the thumb—the feel of the fabric that often makes the sale!

DREW SOLUBLE LUXOLENE D will give your fabrics the finishing touch that distinguishes them above all others. For **SOLUBLE LUXOLENE D** has no equal in imparting a soft, mellow, full-bodied hand with exquisite draping qualities. Even a child can *feel* the difference.

DREW SOLUBLE LUXOLENE D resists oxidation, scorching, discoloration and the development of odors.

TECHNICAL PRODUCTS DIVISION

E. F. DREW & CO., INC.

15 EAST 26th STREET, NEW YORK 10, N. Y.

Factory—Boonton, New Jersey

DREW PRODUCTS

Send for a generous sample of SOLUBLE LUXOLENE D today and prove to yourself that you too can feel the difference.

Technical Products Division
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Please send me a sample of SOLUBLE LUXOLENE D today.

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Serving the Textile industry

A FAMILY OF CHEMICALS FOR COTTON AND WOOL

COTTON

Piece Goods—Sted, Monsanto's non-sudsing detergent, is powerful yet chemically mild, and won't damage the most delicate fibers. Sted works well in hard water without softeners. Easy rinsing saves time, labor and helps prevent odor.

Flame Retardance—Monsanto's Rezgard A, specifically designed for cotton, meets New York City standards for fire retardants on textiles. Rezgard is a fugitive-type, and water soluble, although it is durable for considerable periods of time. Rezgard does not alter tensile strength, hand, or other characteristics.

Dyeing—A powerful wetting and scouring agent, Monsanto's Sterox proves effective as a dyeing assistant, for a growing number of cotton finishers. Sterox competes favorably with other detergents on a money-value basis.

Merlon—The salability of cotton is greatly increased by the use of the Merlons . . . Monsanto's series of water dispersible resin polymers. The Merlons provide a fine, crisp, durable hand on cotton sheetings . . . a percale-like finish for very little more than the cost of starch. Wear resistance also is improved.

Tickings—The Merlons improve hand, as on sheetings described above. In addition, a special Merlon formulation gives improved wear resistance on tickings.

Dress Goods and Suitings—Resloom, Monsanto's melamine resin, provides durable wrinkle resistance on a wide range of cotton constructions. Resloom has proved successful on millions of yards now in consumer hands; the cotton snubs some wrinkles and sheds the rest. In addition to wrinkle resistance, Resloom provides durable stability.

Direct Dyed Goods—Improved washfastness is gained by the use of Monsanto's Dye Fixative 105. In direct dyed goods, the dye fixative improves the quality without substantially raising the finishers' costs.

Reg. U. S. Pat. Off.: Syton, Resloom, Merlon, Rezgard, Sted, Sterox.

WOOLENS & WORSTEDS

Stock—For the toughest cleaning jobs in the world, Monsanto offers two powerful detergents, Sterox in liquid form, Sted in drypowder form. Monsanto offers specific formulations for your particular cleaning problem. Both detergents are powerful and yet chemically mild, and *rinse easily* . . . saving time and labor.

Syton—Monsanto's colloidal dispersion increases yarn strength from 10%-to-30% depending upon the particular mill. Applied at the picker or gill box, Syton provides better carding, more uniform roping or roving. Because of increased strength, ends down are reduced and it's possible to spin closer to the limit spin. Mills, therefore, get the most value per pound of expensive stock.

Rug Yarns—In scouring rug yarns, Monsanto's Sted gives a uniform, clean base for dyeing. Its chemical action is mild, yet very powerful. Because it is non-sudsing, Sted rinses easily and mills consequently save operating time and labor.

Shirtings, Blankets—The foremost and outstanding method for wool shrinkage control. Woolens with Resloom washability are already on the market, and successful in the most exacting consumer tests. As many as 75 washes with less than 5% shrinkage. Through the new processes, Resloom can now be applied without investment in expensive curing equipment.

Woolen Suitings—Monsanto's Merlon, a series of styrene resin dispersions, gives added body to woolen suitings. Monsanto can recommend one of the Merlon dispersions exactly suited to individual wool fabric requirements.

Suitings—Resloom builds body into the fabric, in addition to washability. The bodying effect produces better drape and better tailor-ability . . . in addition to a hand which retains the fineness of traditional wool suitings.

Piece Goods—Monsanto's liquid-form Sterox is now used in continuous scouring systems for piece goods. Sterox is a powerful, yet chemically mild detergent, which *rinses easily* . . . and cleans thoroughly throughout without damaging the most delicate goods.

MONSANTO CHEMICAL COMPANY, Textile Chemicals Dept., Desk T.I.T. 27, Boston 49, Mass.

Dear Sirs:

Please send me information on textile chemicals for:

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

MONSANTO
CHEMICALS — PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

The Outstanding Style-Sensations of the FUTURE are taking Shape...

...NOW on Today's Modern, Miracle-working C&K Looms

W-2...W-3

These two looms are unmatched for versatility in weaving woolens, worsteds, upholsteries and certain blended fabrics. For the W-family's widely varied range of loom-construction features includes: All widths . . . 2 x1 . . . 4 x 1 . . . 4 x 2 . . . 4 x 4 . . . bobbin changing . . . filling mixing . . . tri-color . . . convertible . . . pick and pick . . . Knowles head . . . jacquard . . . friction letoff . . . automatic letoff . . . multiple beam letoff . . . 30" beams . . . all purpose takeup . . . lower roll takeup . . . high roll takeup . . . multipliers . . . four shuttle sizes . . . one-shot lubrication . . . roller bearings . . . batwing picking . . . center filling fork . . . electric warp stop motion . . . mechanical warp stop motion . . . binder release.

C&K's W Looms weave finer fabrics, at higher speed and lower cost . . . as witnessed by the labels of leading woolen mills. And whether you weave woolens or sculptured carpets, the same thing can be said of the modern C&K Loom, shown below, which is designed to weave *your* cloth. *See C&K today!*

C&K's "Conference Corner"

As we go to press, we notice that a New York newspaper reports as follows: "INDUSTRY REJECTS EXCESSIVE ORDERS—Big Durable Goods Producers Send Back 'Panic' Requests, Ask They Be Trimmed — Allocations Are Feared."

That's the kind of stampede that leads not only to allocations, but may run far beyond, to government intervention and control. So it is gratifying to read in the textile press, the same week, that while there is definitely "an increased demand for textile machinery, *there is no panic or scare-buying on the part of the mills.*"

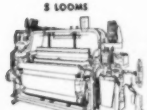
This is the safe and sane middle road, both for today and for the foreseeable future. In fact, it is the road of sure and steady progress in weaveroom-modernization, guide-posted by C&K for the last 25 years by this often-expressed principle: "EACH YEAR, REPLACE AT LEAST 10% OF YOUR LEAST EFFICIENT LOOMS."

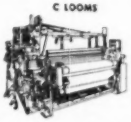
This program is neither too much nor too little, and will help to keep weaving machinery in an even and equable flow of supply to small and large mills alike. Get in touch with C&K today about the looms you need to keep *your* mill competitive.

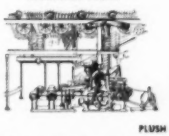
...and a word about PARTS & SUPPLIES

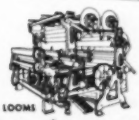
It pays to keep this fact in mind: Interchangeable parts for *all* C&K Looms are available *only* from C&K. And this means *non-stock parts*, as well as the more commonly ordered items which are stocked in anticipation of your orders. It's good business to order all C&K Loom parts direct from the Loom Works. For then you can *always* be sure of getting *anything* you need.

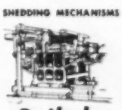
This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics


S LOOMS

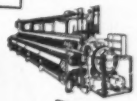

C LOOMS

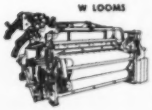

AXMINSTER LOOMS


PLUSH LOOMS


SHEDDING MECHANISMS

FELT LOOMS


NARROW-FABRIC LOOMS


W LOOMS

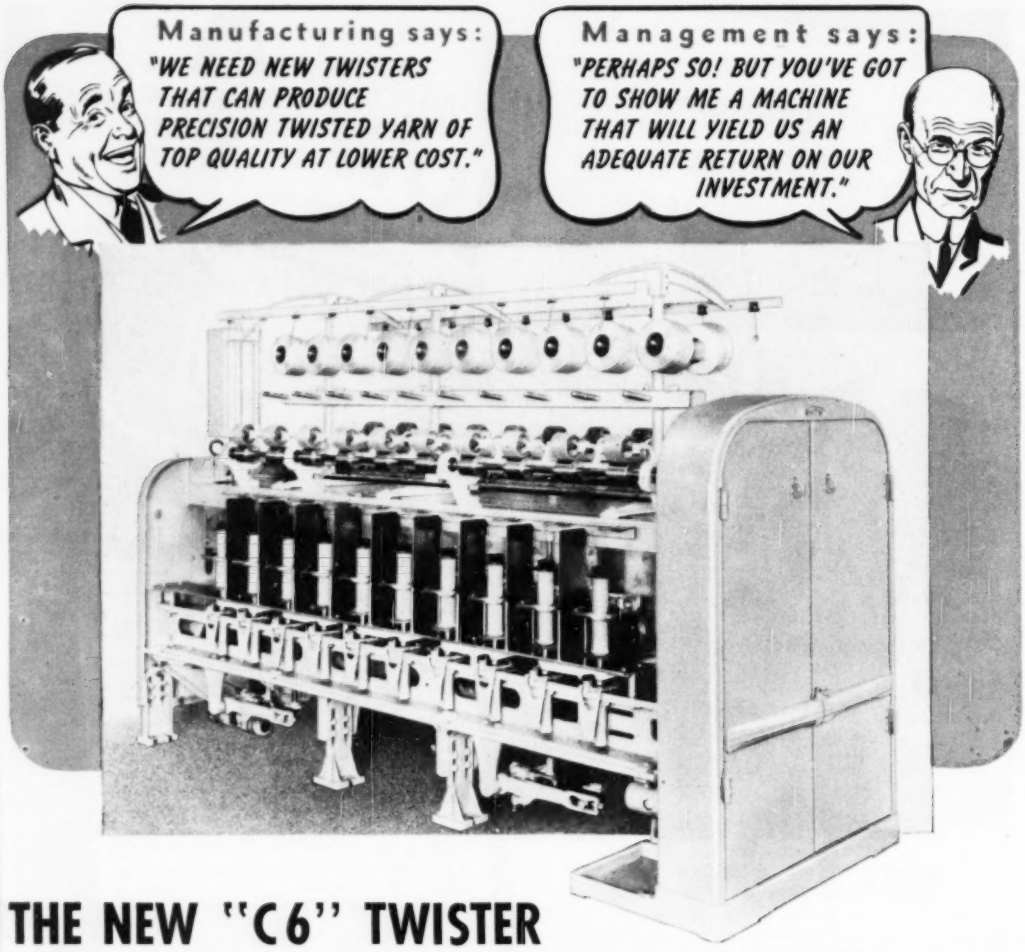
DUCK LOOMS

World's Longest Line of Looms...Built by

CROMPTON & KNOWLES LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.


Manufacturing says:
"WE NEED NEW TWISTERS THAT CAN PRODUCE PRECISION TWISTED YARN OF TOP QUALITY AT LOWER COST."
Management says:
"PERHAPS SO! BUT YOU'VE GOT TO SHOW ME A MACHINE THAT WILL YIELD US AN ADEQUATE RETURN ON OUR INVESTMENT."

THE NEW "C6" TWISTER will satisfy BOTH requirements!

From both the production and financial viewpoints the new Whitin Model "C6" Twister is a sound investment for your mill. Performance tested by the yearly production of millions of pounds of synthetic yarn, it is designed to produce packages up to 4 lbs. with a wide selection of winds produced by Whitin patented builders. Simplicity of operation, plus ease in creeling of supply packages makes this machine popular with operators and management alike.

Write today for illustrated folder giving complete information about the model "C6" Twister and describing its many special features.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

They're "Springy"

... thanks to Acetate!

Celanese Acetate Rayon Gives You These Selling Extras*

- **A rich, full hand—perfect comfort with less weight**
- **Unlimited style effects through cross dyeing**
- **Wrinkle-resistance for continued neatness—creases that keep their sharpness**
- **Moth, mold and mildew resistance**
- **High dimensional stability**

If there's one thing that sells rayon suits right off the rack, it's a firm, springy hand.

Men have come to associate the resilient, clear finished rayon fabric not only with wrinkle resistance, but with coolness, dimensional stability, and long wear.

And they're right! For the same Celanese* acetate staple fiber that gives these fabrics their springiness, also contributes to the other qualities that are making rayon suitings so successful.

Celanese Corporation of America, 180 Madison Avenue, New York 16.

Available in Canada from Canadian Cellulose Products Limited, Montreal.

Celanese* Staple Fiber of Acetate Rayon

*Reg. U. S. Pat. Off.

may we serve you, too?

...Warp Sizes for Natural and Synthetic Fibers

...Starches, Dextrines, Gums and Resins for Finishing

...Printing Thickeners for All Types of Colors.

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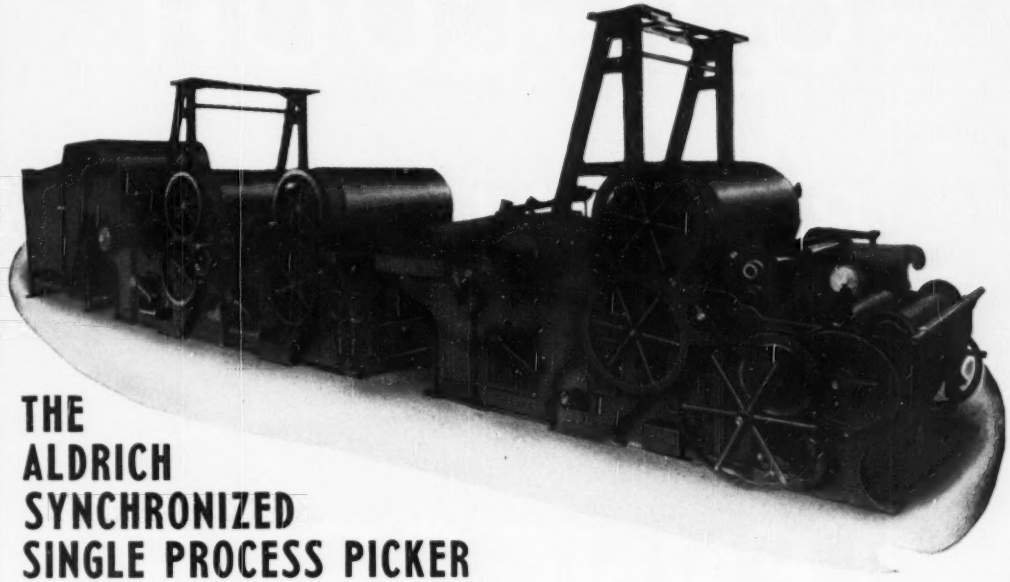
FOR MAKING EVENER CARD SLIVER



THE ALDRICH SYNCHRONIZED SINGLE PROCESS PICKER

A true single-process picker, in which the finisher section is fed with a smooth, well-formed lap from the breaker section, instead of with loose cotton from a gauge box or hopper feeder. The Aldrich Synchronizer controls the feed from the breaker section to deliver the lap exactly as required by the finisher.

This makes a lap which is not only quite even yard by yard, but unusually even in every direction throughout the lap. Such a lap will make a very even card sliver.

The feeder on the Aldrich picker is equipped throughout with permanently lubricated ball bearings, which never require attention.

The Aldrich picker has all possible parts in the evener mounted on ball bearings for extreme sensitivity.

The Aldrich picker is equipped with a new and improved, completely silent, sideshaft drive to the evener.

AldricH MachinE

Greenwood WorkS South Carolina

C_6H_5COOH

BENZOIC ACID FROM TENNESSEE

More and more buyers of chemicals are becoming quality conscious, and particular buyers are conscious of quality in chemicals from Tennessee.

Dependable quality is assured because we produce our chemical products from basic raw materials under conditions of rigid laboratory supervision. Integrated production is a safeguard of quality. It enables Tennessee to maintain strict "on time" deliveries.

We'll gladly send you specifications. Stocks at key points enable you to get deliveries without delay.

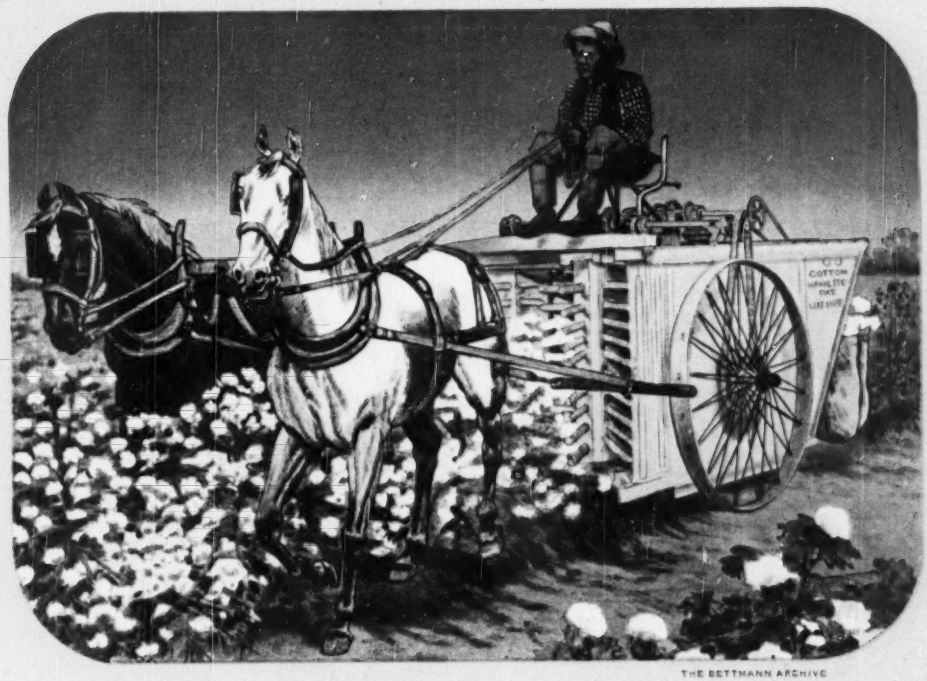
For particular needs in heavy or fine chemicals, it's a good rule to see that they always come from Tennessee.

TENNESSEE PRODUCTS & CHEMICAL *Corporation*

NASHVILLE, TENNESSEE

Continual effort is being made to perfect a mechanical cotton picker.

THE ISELIN DIARY, 1885



THE BETTMANN ARCHIVE

There's always a better way

American industry has progressed mightily by applying this principle to its machines and methods alike. By 1885, Iselin's better way of making *working capital* work harder had been an accepted financial tool for over 75 years . . . Today, perfected by nearly a century and a half of experience, Iselin's Factoring service speeds the productivity of working capital by turning receivables into cash. As an added safety feature, it eliminates credit risks and losses . . . Our clients' consistent success suggests that you, too, may profit from our methods.

Send for booklet on our Factoring service to industry.

William Iselin & Co., Inc.

357 Fourth Avenue, New York 10, N.Y.
200 Keeler Building, Grand Rapids 2, Mich.

FOUNDED IN 1808

Vat Colors for cotton shirtings

For the best in all-round fastness properties—use vat colors. Du Pont vats are suitable for all types of application. They're available in a wide range of shades for printing, duplex printing and over-printing—and for dyeing. They have the same fastness whether applied to yarn or piece goods.

Du Pont offers Ponsol*—anthraquinone-type dyes—and Leucosol*—specially prepared anthraquinone types for printing. Our Technical Staff will assist in solving your problems. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Du Pont Dyestuffs

DU PONT

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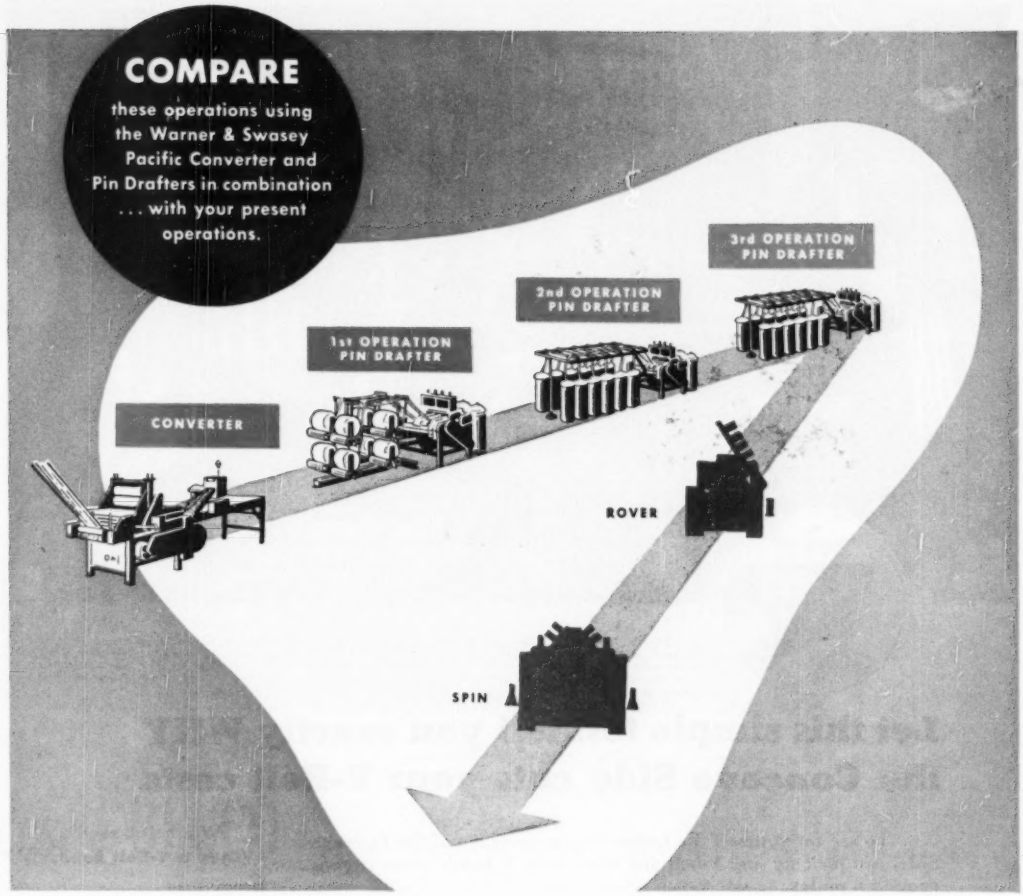
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY


COMPARE
these operations using the Warner & Swasey Pacific Converter and Pin Drafters in combination . . . with your present operations.
3rd OPERATION PIN DRAFTER
2nd OPERATION PIN DRAFTER
1st OPERATION PIN DRAFTER
CONVERTER
ROVER
SPIN

They're "Perfect Partners"

IN ANY "perfect partnership" the abilities of one partner complement those of the other.

That's exactly what happens when you use the Pacific Converter and Pin Drafter in combination. You get the highest possible quality yarn, with excellent uniformity of counts and evenness, tensile strength, blending. You get worsted or blended sliver of suitable weight for entry into the reducer of the Bradford system, the chute or forefinisher of the Continental system, or the roving frame of the Modified Cotton system.

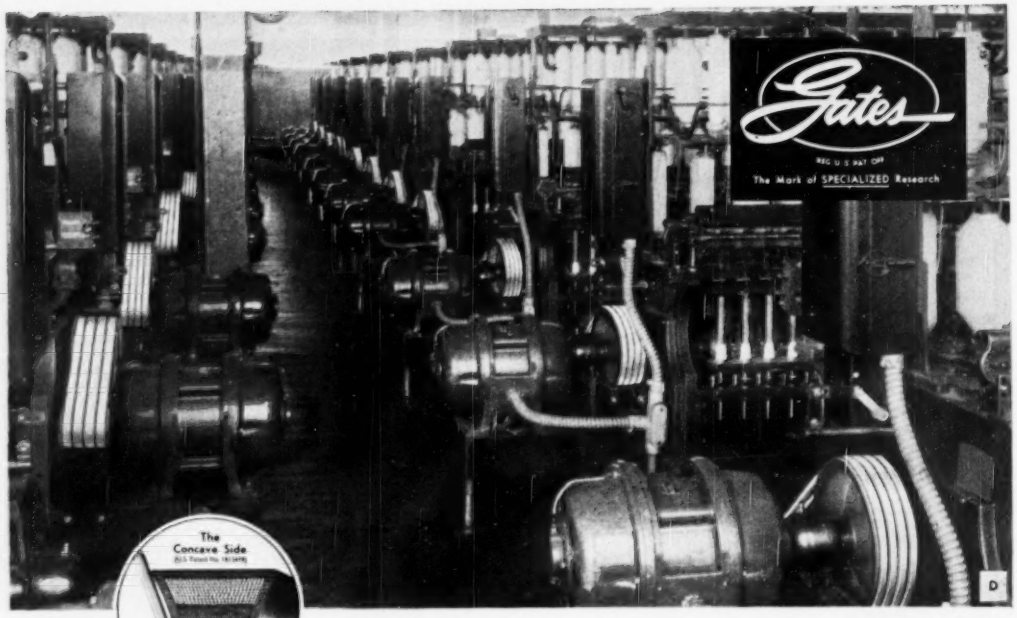
CUTS COSTS—In Worsted Systems the Converter, using tow, eliminates picking, carding and gilling operations of cut staple . . . costly processes which must be performed.

Add to all this the big advantages of the Pin Drafter, which represent a tremendous advance in drafting operations—and you'll waste no time calling in our Field Engineer in your territory. He'll be happy to work with you—give you complete information.

WARNER & SWASEY
Cleveland
TEXTILE MACHINERY DIVISION

BRANCH OFFICES: RIVULET MILL Uxbridge, Mass. · 6910 MARKET ST. Philadelphia, Pa. · CANDLER BLDG. Atlanta, Ga.

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY



Cliffside Mills (North Carolina) wished to change over some lineshaft driven spinning frames to individual drives—and to install the drives on the end of the frames *opposite* the gears. This forced the *cylinders* to transmit the power the full length of the frames. Old-timers predicted that heavier cylinders would have to be bought to stand the strain. But the Gates Vulco Ropes, shown on the Drives, proved so well able to cushion the shocks that they had operated without trouble for 4 years, 16 hours a day, when this picture was taken.

Let this simple test tell you exactly WHY the Concave Side cuts your V-Belt costs

To see for yourself the belt-saving importance of the Concave Side, just pick up *any* V-belt and bend it as it bends when it goes around a pulley.

As the belt bends, grip its *sides* firmly with your fingers. You will feel the sides of the belt *change shape*. This is because the top of the belt is under tension and, hence, grows *narrower* while the body, under compression, *bulges out*. (See figure 1 and 1-A)

Now look at figures 2 and 2-A. There you see how the bending changes the shape of the belt that is built with the Concave Side —The Gates Vulco Rope. The concave sides of this belt merely *fill out* and become perfectly *straight*. There is no side-bulge. This belt, when bent, *precisely fits its sheave groove*.

A very distinct saving in belt wear results. No side-bulge means that the sides press *evenly* against the V pulley and therefore wear *uniformly*—resulting in longer life for the sidewall and, naturally, *longer life for the belt!*

If you care about cutting your belt costs, it will pay you to make sure, whenever you buy V-Belts, that you get the V-Belt with the Concave Sides...the Gates Vulco Rope!

What Happens When a V-Belt Bends

Straight-Sided V-Belt

How Straight-Sided V-Belt Bulges in Sheave-Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear at Point Shown by Arrows.

Gates Vulco Rope with Concave Side

The Concave Side Fills Out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley—Uniform Wear—Longer Life!

CS-508

THE GATES RUBBER COMPANY
DENVER, U.S.A.
World's Largest Makers of V-Belts

GATES VULCO ROPE DRIVES
Engineering Offices and Jobber Stocks IN ALL INDUSTRIAL CENTERS of the U. S. and 71 Foreign Countries

for high efficiency in

BLEACHING
DYE OXIDATION

use BECCO PEROXYGEN compounds

••• You can get whiter, brighter goods at lower cost with BECCO Continuous Hydrogen Peroxide Bleaching. This flexible process, using J-Boxes, couples the efficiency of a continuous flow of goods with the lower overall cost of a BECCO Hydrogen Peroxide bleach. Hydrogen Peroxide 35% and 50% are *safe* bleaches; their mildly alkaline solutions of active oxygen give a highly effective bleaching action. Compared to the batch method, you save on chemicals, steam and overhead.

Hydrogen Peroxide safely and effectively oxidizes vat dyes on all fibers. Easily added to the bath, it rinses freely, leaving no residue.

Other BECCO Peroxygen chemicals for specialized bleaching processes include Peracetic Acid 40% for alkali-sensitive fibers, Sodium Carbonate Peroxide and Sodium Pyrophosphate Peroxide . . . doubly useful as alkaline bleaching agents and detergents.

It will pay you to discuss your bleaching operations with a BECCO representative, a specialist in continuous peroxide bleaching and in the treatment of textiles with active peroxygen compounds. For further information, use the convenient coupon below.

BECCO SALES CORPORATION
Sales Agent for Buffalo Electro-Chemical Company, Inc., Buffalo 7, N. Y.
Buffalo • Boston • Charlotte • Chicago • New York • Philadelphia

BECCO SALES CORPORATION, Buffalo 7, N. Y.

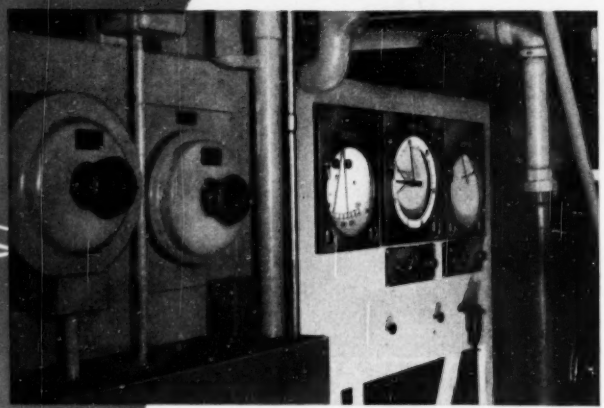
☐ Please send me literature on BECCO Continuous Peroxide Bleaching.
☐ Please have a BECCO representative call.

Name..... Title.....
Company.....
Address.....
City..... Zone..... State.....

Simplify, Improve, Economize

. . . your continuous dyeing range with

BROWN ADVANCED INSTRUMENTATION



ADVANCED INSTRUMENTATION INCLUDES:

- ***ElectroniK* Potentiometers . . . for recording and/or controlling pH, oxidation-reduction potential, temperature and speed.**
- **Brown Electric Flow Meters**
- **Brown Liquid Level Gauges**
- **Brown Thermometers**
- **Brown Pressure Gauges**

Continuous dyeing requires continuous control of *all* variables, not of one or two. Any deviation of temperature, level, flow or pressure soon reflects its "mistake" in subsequent steps of the process. These "mistakes" can prove costly. That's why progressive dyers insist on automatic control for their entire dyeing range.

A typical installation of automatic control is illustrated in the photo above. Here is shown the control for padder temperature and level . . . a part of the completely integrated system which unerringly guides the process from padder to final dry can.

Whether your continuous dyeing follows the Williams System or the Du Pont Pad-Steam System, better dyeing operations can be assured when Brown instrumentation controls the process.

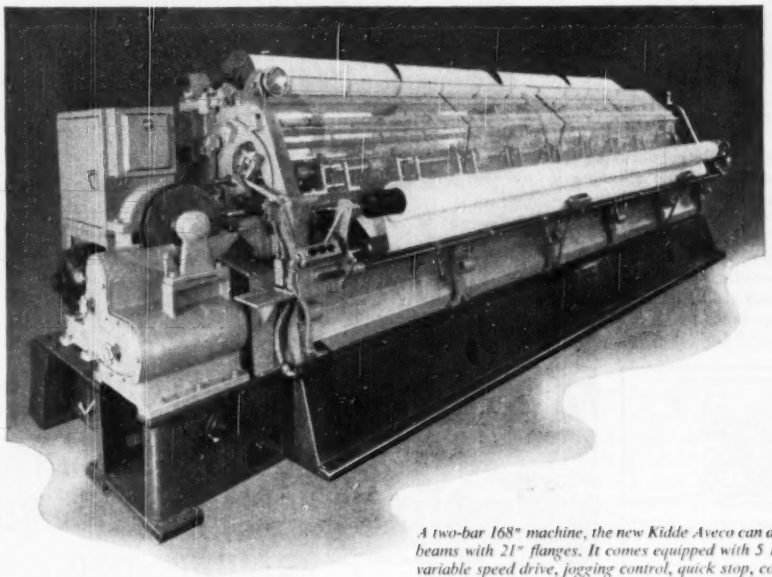
Brown *creative* instrumentation helps produce *better* finished textiles at *lower* operating costs. Call your local Honeywell engineer for help with every variable in your range . . . he is as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4492 Wayne Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

MINNEAPOLIS **Honeywell**

BROWN INSTRUMENTS

Improved Kidde-Aveco High Speed Tricot Machine Has Many New Features



A two-bar 168" machine, the new Kidde Aveco can accommodate beams with 21" flanges. It comes equipped with 5 H. P. motor, variable speed drive, jogging control, quick stop, continuous let-down, continuous take-up, tachometer and 2-shift rack counter.

New Continuous Let-Down—is mechanical in operation, easy to set and maintain. It improves fabric quality, gets rid of shade marks, reduces stop marks.

New Continuous Take-Up—quickly and simply adjusted for quality. No gears or sprockets to be changed. Clutch is eliminated. Once set, no adjustment is required.

New Variable Speed Drive—means quiet operation. Change machine speed by merely turning hand wheel. No gear changes needed. Tachometer included.

And Other Features—make it even better; improved plunger design, improved front guide bar lifting mechanism, quick-stop and jogging control.

● These are just some of the advantages that put the new Kidde-Aveco High Speed Tricot Machine in a class by itself for turning out greater quantities of better quality fabrics. Other features include: a solid one-piece base which gives the machine stability, less vibration; a rugged girth which keeps parts aligned; large diameter cams, running enclosed in oil, which means no trouble or repairs—for years to come.

The Kidde-Aveco High Speed Tricot Machine will give you fabrics without shade marks and stop marks so small they dress out . . . it will give you more poundage than you ever imagined was possible. Why not write or phone for an appointment to see the Kidde-Aveco Tricot Machine in our plant?

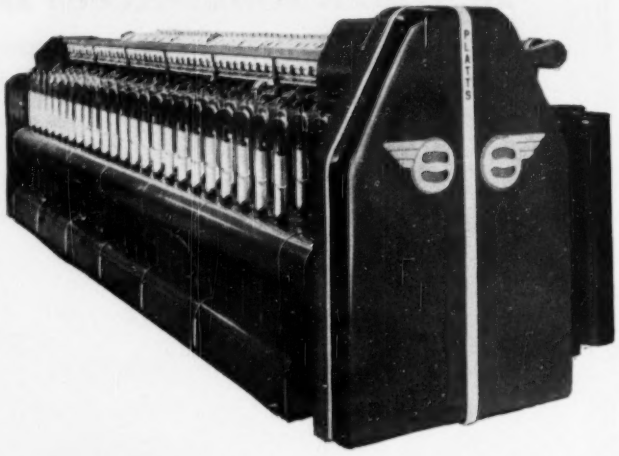
KIDDE MANUFACTURING CO., INC., BLOOMFIELD, NEW JERSEY

Kidde-Aveco

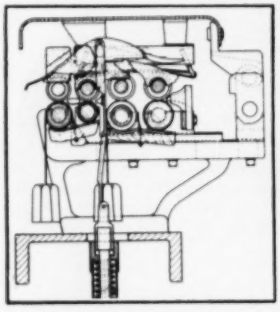
FOR TOP QUALITY FABRICS

NEW PLATT HIGH DRAFT ROVING FRAME

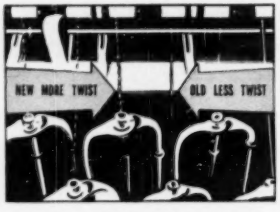
MS-2



Control of fiber and twist reaches greater perfection in the new Platt MS-2 High Draft Roving Frame. Patented flyers produce a roving of 20% greater strength, thus allowing a reduction in turns per inch and permitting higher front roller speeds. If you are interested in definitely increasing your production, you will want our eleven page booklet on "Roving" with seven mechanical detail illustrations of this new design machine. Write Atkinson, Haserick and Co.



TRIZONA: Graded and controlled drafting with the Trizona (Trade Mark) System will permit a wide range of drafts, using as it does 3 drafting zones with special patented guides for synchronized traverse and unprecedented fiber control.



BETTER TWISTING CONTROL: The new Patented Flyer overcomes breakage from tension in the flyer leg, around the presser, and onto the bobbin, as a greater proportion of the total twist is inserted between the nip of the front rollers and the top of the new flyer. The twist runs right up to the roller nip, giving greater twist regularity, and a more consolidated roving, permitting a greater length to be wound on the bobbin.

NEW FEATURES PERMIT GREATER MACHINE EFFICIENCY—HIGHER ROVING PRODUCTION

NEW ADVANTAGES

1. Production increases up to 15%.
2. Machine efficiency raised 20%.
3. End breakage rate reduced as much as 50%.
4. Waste accumulation decreased by 75%.
5. Unprecedented fiber control.
6. Remarkable roving strength and regularity.
7. Lighter work load.
8. Wide range of drafts.

NEW FEATURES

1. New patented flyer.
2. Patented fiber guides with synchronized traverse.
3. Integral motor drive.
4. Simplified electrical control.
5. Automatic measuring motion.
6. Building motion with gear change (optional).
7. Simplified gearing with easy and accessible changes.
8. Noise reduction.
9. Helical gearing for spindle and bobbin drives.
10. Neat disengaging motion.
11. Flush fitting rear inspection doors.
12. Centralized lubrication system.

MACHINERY OF:

PLATT BROS.

(Sales) Ltd. • Oldham, England

INCLUDING THE MACHINERY OF:

PLATT BROTHERS & CO., LTD. — DOBSON & BARLOW, LTD.
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INQUIRIES TO

SUPER MARKET of the Textile Industry

Atkinson, Haserick & Co.
BUSINESS ESTABLISHED 1823
Textile Machinery Agents and Engineers
211 CONGRESS STREET, BOSTON 6, MASS.
1639 W. MOREHEAD ST., CHARLOTTE, N. C.

The HOUGHTON LINE
Circulation 198,000

The HOUGHTON LINE NEWS

VOL. 14 • NO. 4 OCTOBER, 1950

...the "near editor's" viewpoint

Russians claim invention of Scotch whisky, but switched to manufacturing vodka after the Scots produced an admirable imitation.

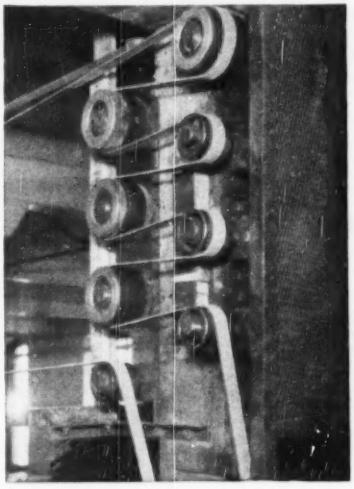
It is certainly worthwhile to get together with your competitors once in a while and discover that some of them have more troubles than you do.

One way to help overcome the postal deficit is to reduce congressional franking privileges. Very seldom is the stuff they send out of any real importance.

A summer resort is where the natives live on your vacation money all winter.

Aaron C. Carpenter

CHAIRMAN OF THE BOARD.



Pre-Stretched Loom Belting

Houghton's OKAY Tred Leather Belting, recommended for looms, is given a "break-in" on these pulleys after completion, which removes up to 1% of permanent stretch. That means longer service runs without early take-up.

Better Than We Knew!

We were sure we had an unusual product in *Sulfol 448* for treating woolens and worsteds, but even we were surprised at the rate repeat orders came in after mill trials. Reasons: antistatic properties, quick emulsification, non-gumming, non-corrosive, non-oxidizing, easy scouring. We've got a real wool oil in this product; want to try it?

Don't Be Fooled by "Active Content" Figures

The amount of so-called "active ingredient" in a surface active agent does *not* indicate its relative efficiency.

If two surface active agents are of identical chemical nature, and one contains more "active ingredient" than the other, then the first would be a better buy than the second if the prices were equal.

But the chemical nature of such agents varies widely, so they are not often directly comparable. By "active ingredients," of course, we refer to the chemical content as contrasted with water, or inert material, or any vehicle which carries the chemicals that do the actual work.

We have found that a wetting agent having an active ingredient content of 65% was actually less efficient than another chemically different type having only 30% active ingredient. Also we have proved that one wetting agent containing 60% active material was five times faster than another having 65% active content. The same is true of detergents having different chemical bases.

It is necessary to evaluate surface active agents to determine the most efficient point of their operation—not based on active ingredient content alone, but on concentration to be used. To employ too much often gives no better results than using the lowest concentration which has been predetermined to provide rapid speed of wetting.

The real problem is to ascertain the point at which the product performs best, irrespective of "active ingredient" content. This was covered fully in a technical article in the LINE, September 1950 issue. If you do not have a copy, write for it.

Quick Shots

- *For a low-cost-per-pound wetting agent we'll put* Cerfak 453 *up against any of the some 700 now being offered. Write for new folder describing it.*
- *Having trouble with oxidized oil deposits on tentering frames, dryer chains or hydraulic equipment? Try Houghton's* GUM SOLVENT "B".
- *And for sludged-up fuel oil tanks we have a quick remedy —* Houghto-Solv. *Add 1 quart per 1000 gal. of fuel oil.*
- *How about resin finishes — have you tested our* RESONET *line?*

E. F. HOUGHTON & CO.
303 W. LEHIGH AVENUE
PHILADELPHIA 33, PA.

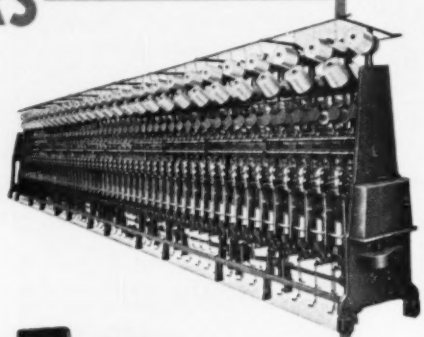
Marquette ROLLER BEARING SPINDLES
are standard equipment on
U.S. ACME TWISTERS

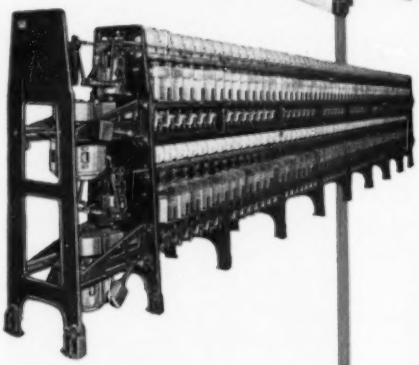
MODERN THROWING EQUIPMENT

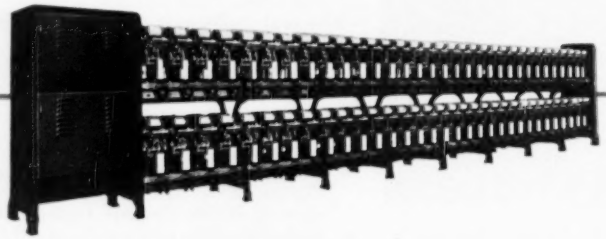
After many years of testing in the laboratory and in the field, U. S. Textile Machine Company now offers Marquette Roller Bearing Spindles as standard equipment on their U. S. Acme Twisters.

Whether you are buying new frames or modernizing your old ones, Marquette Roller Bearing Spindles will give you MORE YARN AT LOWER COST. They increase production by operating efficiently at high speeds, with heavy packages and fewer ends down. They save power, save lubricant and require less maintenance.

There's a complete line of Marquette Roller Bearing Spindles for all textiles . . . handling packages up to 12 lb. gross load. We'll be glad to prove their advantages in your mill. Contact our home office or one of our representatives for a test installation.







PROTECTED BY U. S. AND FOREIGN PATENTS, AND PATENTS PENDING

The Marquette
METAL PRODUCTS CO.
CLEVELAND 10, OHIO
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WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • PRECISION PARTS AND ASSEMBLIES

Trends Indicated in Industry Area Survey

Public Relations

TWENTY-EIGHT per cent of the organizations within the areas sampled by TEXTILE INDUSTRIES have a specific executive assigned to public relations and publicity. This fact was disclosed in a total-area sample made by the editors of the magazine.

It was found that 28% of the organizations have a public relations executive whose duties occupy either his part or full time; this represents 42% of the mills, 47% of the spindles, and 54% of the employees. These percentages indicate that larger companies are more public relations conscious than the smaller plants.

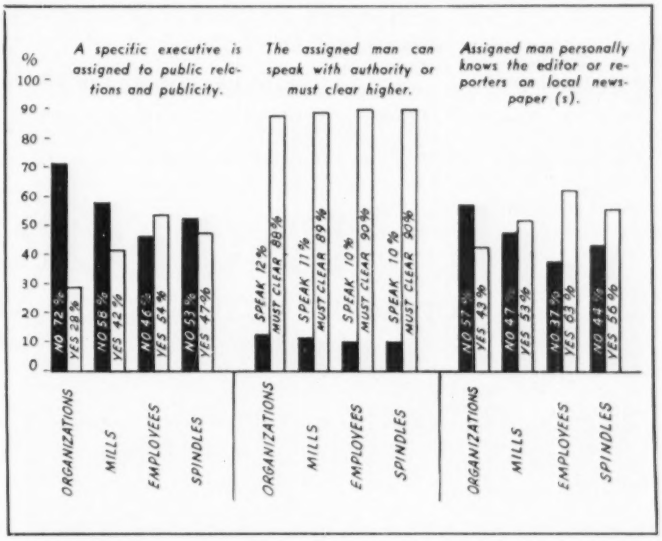
Speak or Clear. Speaking with authority is another question. The public relations executive must clear with higher rank in 88% of the organizations, 89% of the mills, for 90% of the spindles, representing 90% of the employees. He can speak "on his own" and with authority in only 12% of the organizations and 11% of the mills in the areas surveyed.

Seventy-two per cent of the organizations, 58% of the mills, and 53% of the spindles have no specific executive who can speak for the company.

Approximately 10% of the organizations have full-time public relations men, but not all of them are permitted to speak for the company without clearing with higher authority.

Know the Local Editor. In 57% of the organizations, and 47% of the mills, representing 44% of the spindles, the executives answering the survey do not personally know the editor of the local newspaper(s). Many of the smaller plants are in small towns where the editor usually is known.

Also, in certain areas the mill men seem to know their editors better than in others.—J. C. F.



HOW SURVEY WAS CONDUCTED

THE SURVEY was conducted in several southern states on personal visits to the mills by the editors of TEXTILE INDUSTRIES. The total-area sample method was used, whereby all of the mills within a chosen radius were polled. Enough areas were used to give a good sample. Knitting and woolen mills were not included.

To check sampling procedure, the sample of one state was enlarged to include approximately sixty per cent of the spindles. As a further check on the reliability of the sample, questions were injected into the questionnaire on which previously compiled industry figures are available.

Although any method of statistical selection may be criticized, the editors believe that the sample is large enough to indicate a trend in the areas covered.

Even though the double checks made from known figures prove the reliability of the survey, readers are cautioned against an attempt at projecting the percentages for application to other areas or other branches of the industry.

Note: An "organization" may be composed of only one plant, or an organization may represent several plants. The term "mill" indicates a single unit. Thus, where an organization answers, one or more mills may be included in the total. Few industry statistics are based on organizations; most statistics apply to mills, spindles, or employees.

L. F. Dommerich & Company

Executive and General Offices

271 MADISON AVENUE
NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

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ESTABLISHED 1840

NEWS in BRIEF

Burlap Draperies. The Indian Jute Mills Association has shown many new uses for burlap at a recent exhibition, among them being colored burlap draperies. Handbags and other wearing apparel accessories also were included.

Value of Patents. Owens-Corning Fiberglas Corporation by federal decree, according to the Department of Justice, has been required to license any applicant on a royalty-free basis 200 patents relating to the manufacture of glass fibers. Suit was brought under the anti-trust laws. The rate at which such suits are being filed is increasing.

U. S. Cotton Under ECA. During one summer month cotton from the U. S. accounted for about 52% of the dollar value of recovery goods and services approved for purchase by 16 Western European countries under ECA.

Cotton Mobilization Committee. A 21-member industry-wide cotton mobilization committee to work with government officials in Washington in assuring maximum effectiveness of the raw cotton industry in the national defense program has been appointed by the National Cotton Council. The committee is composed of ginners, warehousemen, shippers, cottonseed crushers, and spinners.

Hybrid Cotton by 1956. Government plant geneticists foresee a new hybrid cotton by 1956 which will be strong enough to compete with synthetic fibers. USDA's Agricultural Research Administration reports that spinning tests on newer breeds of cotton show a yarn strength 50% above the average for the staple length. The Senate has approved a grant of $40,000 additional for research on long staple and hybrid cotton.

Life of 15-Denier FF Hose. Average life of a pair of 15-denier stockings is 18 wearings, according to Roy E. Tilles, president of Gotham Hosiery Company, who based his statement on data gathered by the mill's testing laboratories. The advantage of buying three pairs at a time was shown in statistics which revealed that three pairs give five times the wear of a single pair.

Cotton and Rayon Looms by States. A total of 493,000 cotton and rayon looms were in place to begin the year 1950, according to the Bureau of Census, Department of Commerce. This is an overall decrease of 29,000 or 6% from the 522,000 looms in place in February 1942. Cotton growing states lost 4% of the looms and the New England states lost 13%. Rhode Island and Connecticut lost 27%. States leading in number of looms in place are, in order, South Carolina, North Carolina, and Georgia.

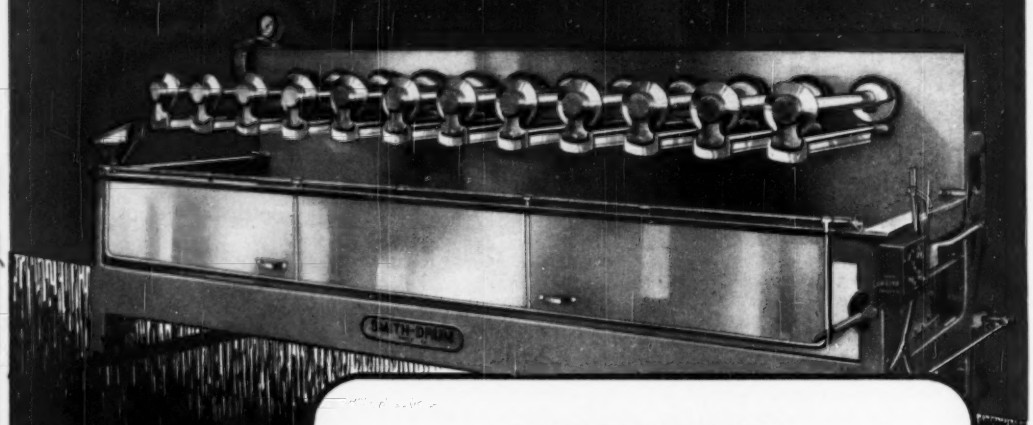
ACMI Washington Services Broadened. A movement to broaden the Washington services of the American Cotton Manufacturers Institute, Inc., and to cooperate to the fullest in the country's mobilization program came when Robert C. Jackson, executive vice-president of the institute, made his headquarters in Washington during and for the emergency. Main office of the institute is in Charlotte. Mr. Jackson has had a number of years experience in working with Washington agencies.

LARGEST OF ITS KIND

A new plant for the manufacture of Venetian blind tape by Russell Products Company, a wholly owned subsidiary of Russell Manufacturing Co., Middletown, Conn., was recently opened at Bennettsville, S. C. At the dedication ceremony, J. Franklin McLaurin of Bennettsville, and G. M. Williams, president of Russell Manufacturing Co., cut the piece of Venetian blind tape across the speakers platform to officially open the plant. This is the largest plant in the world designed for the exclusive production of Venetian blind tape.

✓ Prevents Snarling of Yarn

✓ INCREASES PRODUCTION UP TO 50%



✓ REDUCES DYEING COSTS 10 to 30%

SMITH-DRUM SKEIN DYEING MACHINE

This is the machine that "moves the liquor instead of the yarn." As a result of this principle, first introduced by Smith, Drum & Company, there is no tangling of the skeins or breaking of the filaments. This means greatly improved back-winding with consequent saving in time and cost.

Because there are fewer knots in each skein, the fabrics made of Smith-Drum dyed yarn are of better quality. Savings in dyestuffs, steam, water and floor space result in a reduction in over-all dyeing costs that run as high as 10-30%. Even in large capacity machines, there is no tendency toward variation of shade due to variation of temperature because entire body of liquor moves from one end of machine to the other. Because it handles larger batches than any other machine occupying the same floor space . . . and because faster dyeing permits more batches per day . . . this machine increases production as much as 50% over other types of skein dyeing equipment. Catalog will be sent upon request.

SMITH, DRUM & COMPANY

Allegheny Avenue at 5th Street, Philadelphia 33, Pa.

The movement of Mr. Jackson to Washington from Charlotte in no way affects the status of C. G. Caffrey, who has served the industry in Washington for several years.

"Colorimetry." National Bureau of Standards, Department of Commerce, has published helpful information in a booklet entitled "Colorimetry," which is based on NBS experience in establishing practical working standards of color.

Finishers Consider Cutters. Some finishing plants are considering the problems of the garment manufacturers when they apply a finish, according to a report prepared by Singer Sewing Machine Company. The finishing plants take into consideration such questions as (1) will the finish make the fabric seams pucker? (2) what will the seam efficiency be if this finish is used? (3) what proportion of yarns will be severed by the needle? (4) will the finish cause a high degree of needle heat?

Bristle Shortage. With China controlled by Communists, bristles used in paint brushes and for shuttle tensions will be in short supply. Prices already have soared. Prospects for a free supply of China bristle grow dimmer.

Protect Industry During Defense Job. American industry must be safeguarded from low-wage foreign competition while performing war duties, said George P. Swift, president of the American Cotton Manufacturers Institute. "It would be ironical indeed," Mr. Swift said, "if any major industry of this country were forced to sacrifice, perhaps forever, its own home markets in the course of war-time service during a defense - emergency period that might go on for years." He advised against a further cut in tariffs.

Philip Knitted Outerwear Rep on Research. Morris Philip of Philip Knitting Mills is the representative of the National Knitted Outerwear Association on textile finishing research committee appointed to evaluate the research findings of the Quartermaster Laboratory in Philadelphia. The committee will report to the National Research Council Advisory Committee on textile finishing research and will also determine means of putting findings into commercial practice.

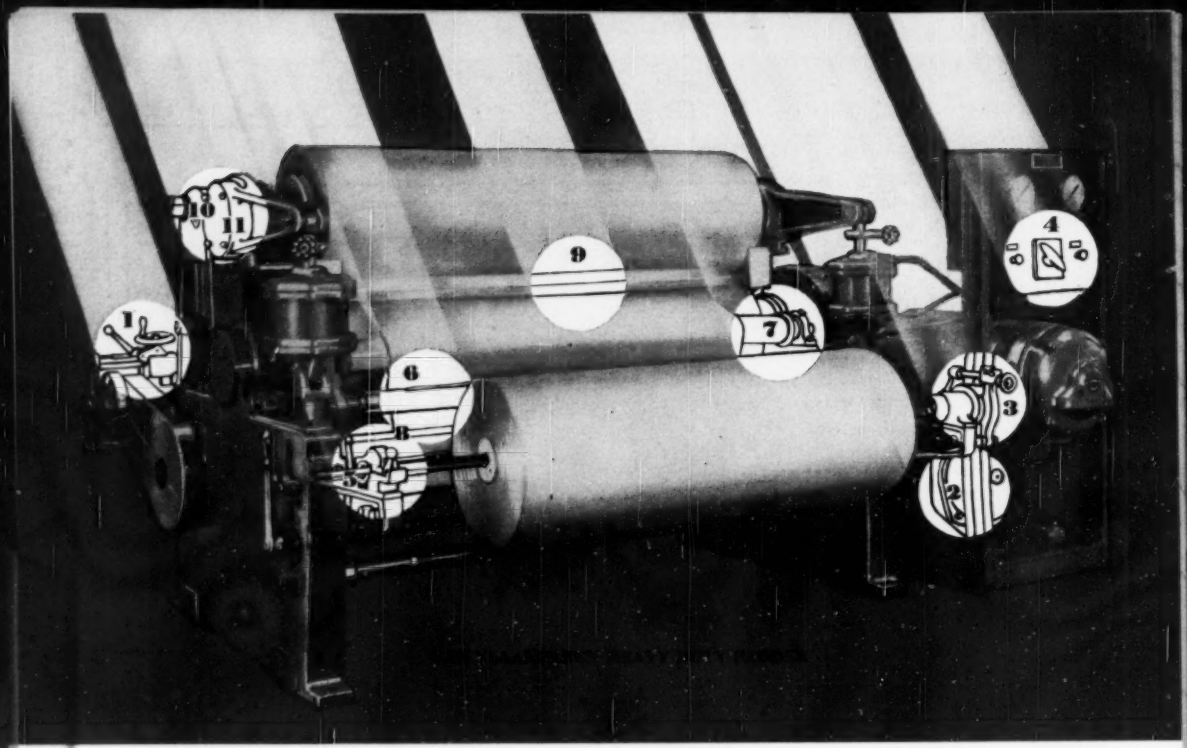
FOR YOUR "VISITING FIREMEN"

This battery-powered truck originally was designed to carry Yale & Towne's guests around their own plant. The guests liked the idea, so by popular demand the truck is now a passenger-carrying vehicle and is a regular production item for the company. Pneumatic tires and front wheel springs assure riding comfort. (TI's editors, who visit mills all over the country, like the idea. Notes on stories could be made while sitting instead of standing; there's ample room for camera, flash bulbs, and other equipment needed for the job.)

To Check Manpower Situation. "Preparedness Self-Check" is a brief questionnaire form for the purpose of enabling management to check its own manpower situation in the event of an emergency. In addition to basic data, the questionnaire covers training and induction, labor turnover, attendance, employee-management relations, wage administration, working conditions, etc. Available from Labor Relations Institute, 1776 Broadway, New York 19, N. Y., 25 cents.

Fabric Barn Roofs? In the not too distant future, farmers may use fabric roofs on their barns, using fabrics treated with mold- and fungus-resistant treated cloth, according to Prof. Wm. H. Weston, Jr., of Harvard.

Cotton Harvesters and Cotton Fires. By carrying safety matches instead of wooden "strike anywhere" matches, harvesters of cotton crops could help prevent cost-



SPOTLIGHT ON SUPERIORITY

Focus your attention on these points of superiority. They will stand out in the light of your experience in processing modern fabrics.

1. It has an entirely new slip clutch take-up. Operates through dual friction plates with sensitive tension control and quick acting engage and disengage lever.

2. Variable speed drive, coupled to worm gear reducer, gives quiet, smooth operation and saves considerable floor space.

3. Malleable iron block brakes have tension indicator for easy reading and brake shoes are independently mounted for smoother action.

4. Pneumatic pressure system controls each cylinder separately, allowing operator to equalize nip pressure.

5. Both let-off and take-up bars have positive center bar locks.

6. All guide rolls are mounted on anti-friction bearings and made of stainless steel.

7. Two rubber covered expanders with sealed ends are provided.

8. The stainless steel pan can be easily and quickly lowered for cleaning.

9. Splash guards and nip guard assure safe, clean operating conditions.

10. Padder rolls are mounted on spherical roller bearings for smooth trouble-free service.

11. Both rolls are easily removed.

VAN VLAANDEREN

You are invited to see this machine.

MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

Worlds largest manufacturer of machines for processing modern fabrics

ly fires. Wooden matches which may become lost in the cotton during harvesting, can cause serious fires when these matches pass through the gin.

Safety Contest Kit. The National Safety Council has made available a packaged plan which shows how to promote interest in safety through contests. The kit contains a complete instruction booklet.

New Air Filters. A new filter which is said to be 1000 to 3000 times as effective as conventional air cleaning equipment has been developed for the Atomic Energy Commission by the engineering firm of Arthur D. Little, Inc., Cambridge, Mass. The filter is further said to be adaptable to use in textile mills. Made of special paper containing tiny asbestos fibers, single units can be built to handle 1000 cfm or can be small enough to handle air for compressed air lines. The filters are not yet being manufactured commercially, but arrangements for their manufacture are being made.

War Clause. Clear notice of the possibility that deliveries of textiles to the civilian trade are subject to possible interruption or delay as a consequence of national defense needs and seller acceptance of military or other essential government contracts has been given to buyers in the form of a contract clause recommended for use by members of The Association of Cotton Textile Merchants of New York. The clause covers several delivery contingencies.

Studies American Cotton Outlets in Europe. F. H. Whitaker, agricultural economist and cotton marketing specialist for USDA, is in Europe for a year or more to study market outlets for American cotton under the Research and Marketing Act. The study is aimed at developing a long-run effort to maintain export markets for American cotton.

Machine Duplicates Argyles. U. S. Patent No. 2,516,697, issued to Standard Hosiery Mills, Inc., Burlington, N. C., covers a new machine designed to duplicate the most intricate and expensive hand knit effects in men's Argyle hosiery at a mass volume price. The machine makes possible a new process called "edgeframing" which produces Argyles with clarity of pattern and color brilliance.

Terminology for "Hand-Knitted." Socks made on hand-operated knitting machines sometimes have been improperly described as "hand-knitted," and "hand-framed," the latter being usage in England and Canada. The National Better Business Bureau, in conjunction with the National Association of Hosiery Manufacturers, suggests such nomenclature be dropped and the following appropriate descriptions adopted: (1) Made on a hand-operated knit-

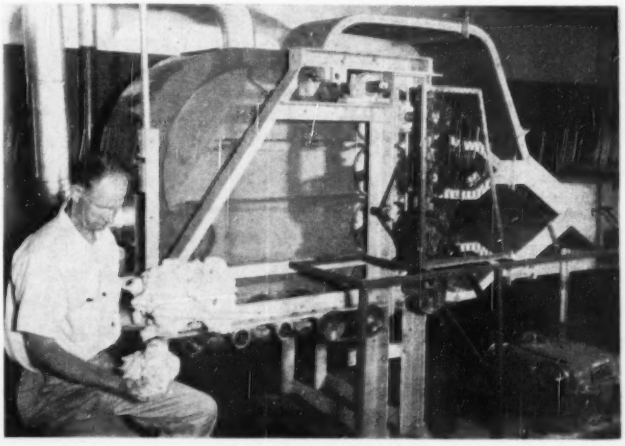
PILOT SIZE EXPERIMENTAL COTTON OPENER

An outgrowth of war-time work on developing equipment to use lint cotton, in place of linters, for manufacturing chemical cellulose, a cotton opener similar to the one shown here can be built in sizes to process almost any desired amount of cotton. Originally the lint cotton feeding equipment was constructed to handle a light bale of cotton per minute, or about 10½ tons per hour.

The machine designed by the Southern Regional Research Laboratory specifically for industrial textile applications has a rated production of 2000 pounds per hour. It has five 34" wide processing cylinders and doffing cylinders and occupies a floor space of approximately 6 x 8 ft.

The opener is fed by a standard automatic hopper-feeder. Cotton is deposited on a lattice conveyor through an aperture, and the conveyor carries the cotton forward into a battery of cylinders which rotate at the same speed and in the same direction as the conveyor. The cylinders are equipped with inclined teeth similar to those on cotton gin saws. The doffers rotate at higher speed than the other cylinders and remove the cotton, throwing it by centrifugal force into the lint flues where air suction conveys it to the next process.

The photo shows lint cotton of the same weight before and after processing through the machine.

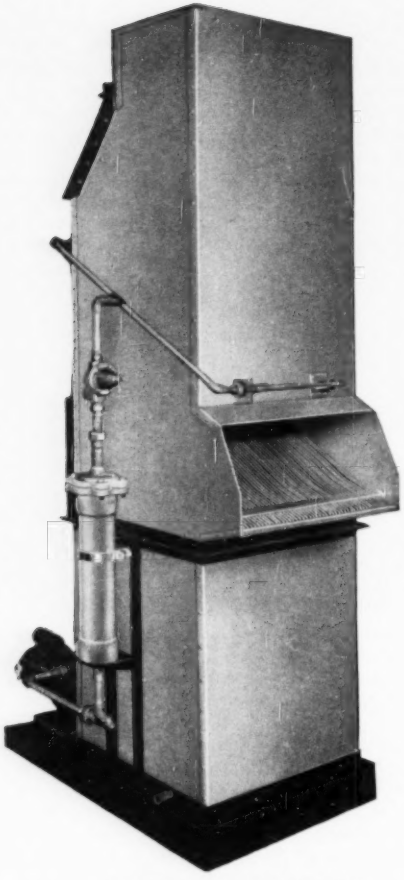


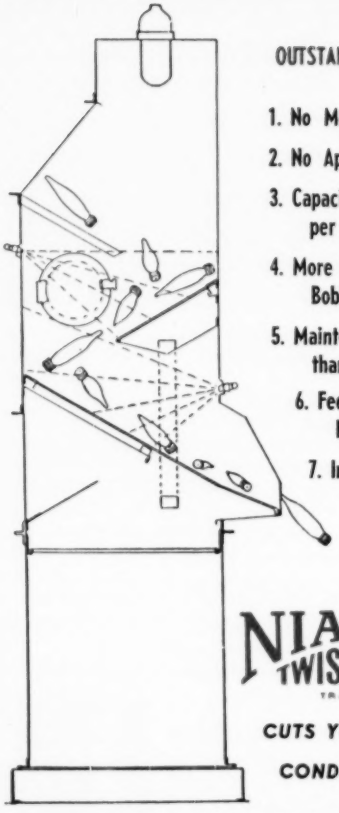
A HIT AT THE SHOW

SOUTHERN TEXTILE EXPOSITION

Oct. 2nd-7th • Greenville, S. C.

Second Floor • Booth No. 230-31





OUTSTANDING FEATURES

1. No Moving Parts
2. No Apron to Replace
3. Capacity up to 3000 lbs per hour
4. More Uniform Wetting of Bobbins
5. Maintenance Cost Less than $5.00 per Year
6. Feeding Devices to Suit Requirements
7. Immediate Delivery

HEADQUARTERS FOR TEXTILE CHEMICALS

SEYCO Products

Warp Sizing
Softeners
Penetrants
Detergents
Scouring Agents
Sanforizing Oils
Sheen Softeners

NIAGARA "Twist Setter" Machine
Yarn Conditioners
Ty-In Penetrants
Dye Assistants
Shuttle Dressing

Wet Processing Chemicals and Auxiliaries

NIAGARA TWIST-SETTER
TRADE MARK

CUTS YOUR CONDITIONING COSTS

FOR BEST RESULTS USE SEYCO PENETRANTS

SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS
• TWIST SETTER MACHINES •

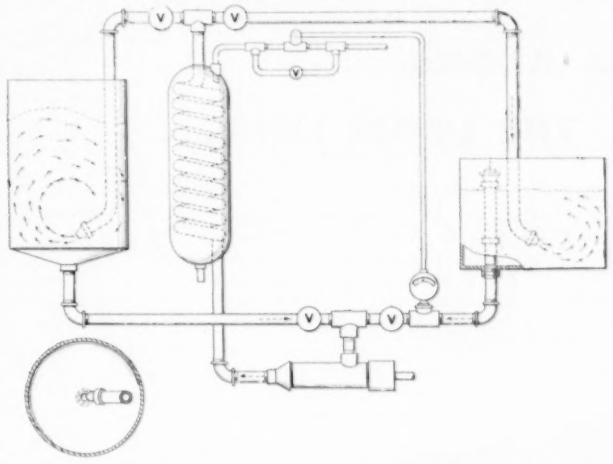
ting machine, (2) made on a hand knitting machine, (3) knitted on a hand-operated machine, or (4) hand machine knitted. The National Hosiery Manufacturers Federation of England has agreed to the foregoing four descriptions for goods sold both at home and to the U. S. The Bureau further recommends that such hosiery labeling in this country conform with the descriptions given.

Lengthens Life of Fabric. Blue Magic, Inc., Philadelphia, Pa., has introduced a "miracle" plastic cream starch which can be used to lengthen the life of any fabric—even women's sheer nylon hosiery, it is said. Coming in tubes like toothpaste and instantly dissolving in either hot or cold water, a tablespoon full of the new product, SAV, will starch a dozen garments. Bursting strength tests on hosiery and other fabrics showed that the product coats the fibers with a strong, invisible armor that greatly adds to the strength of the threads.

Fighter Plane Shelter. A weatherproof, easily erectable fighter plane shelter, primarily for use in frigid climates, is being made by General Textile Mills. Built to withstand 70 mph winds and a snow load of 30 lb per sq ft, the tent-like 4284-lb shelter has no internal supports or obstructions, being held by four aluminum poles and five roof trusses. It is insulated by an inner liner of glass cloth, and a vinyl-coated fabric reflects heat and light.

Japanese Spindle Plans. The Japanese Spinning Association has prepared plans for increasing the country's total spindleage. The Korean outbreak created additional demand for goods of Japanese make. The association expects to have 2,060,000 spindles in operation by mid-1953, a lower number than the American textile industry anticipated.

For More Nylon. DuPont is increasing the capacity of its nylon yarn production plant at Martinsville, Va. This marks the eighth expansion of nylon manufacturing facilities in the last five years.



APPARATUS FOR SIZE PREPARATION AND STORAGE

A fluid jet is used to agitate the size contents of a tank in a new invention (U. S. Patent 2,516,884) for the preparation and distribution of sizing materials. A novel type of float valve maintains a constant fluid level in the size tank, and heating is accomplished by circulating the fluid through a coiled pipe enclosed within a steam-filled container.

The size preparation unit comprises a makeup tank, pump, and heat exchanger so connected that the pump draws fluid from the bottom of the tank and forces it through the heat exchanger. The discharge from the heat exchanger is fed back into the tank at a position and in a direction designed to produce vigorous agitation of the contents.

For storing and distributing finished size, the combination of storage tank, pump, heat exchanger and size box is used. In this instance size is withdrawn simultaneously from storage tank and size box and pumped through the heat exchanger. (Developed at Southern Regional Research Laboratory, New Orleans.)

LEGISLATION IN ASSOCIATIONS

EDITOR TEXTILE INDUSTRIES:

When I go to a state or industry-wide association convention, I usually hear a number of fine speakers, play a few rounds of golf, attend a cocktail party, and enjoy a tasty banquet.

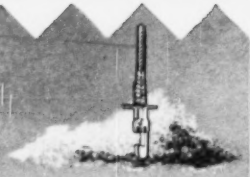
Since some of these meetings are recognized as little vacations, in addition to the business discussions and contacts made, all of this is well and good. Not even the most radical of labor leaders could criticize the meetings because of these things. After all, I suppose, labor conventions are run along just about the same lines.

There is one big difference, however, and I believe all of our textile manufacturers associations could learn something from the labor boys which would be of real value:

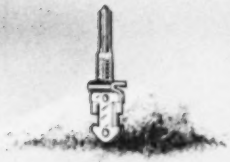
At just about every one of these conventions there are legislative reports. In these reports the association's attorney or chairman of the legislative committee tells the membership what has been done in the past year and what stand the association's legislative committee will take on legislation affecting the industry in the coming year.

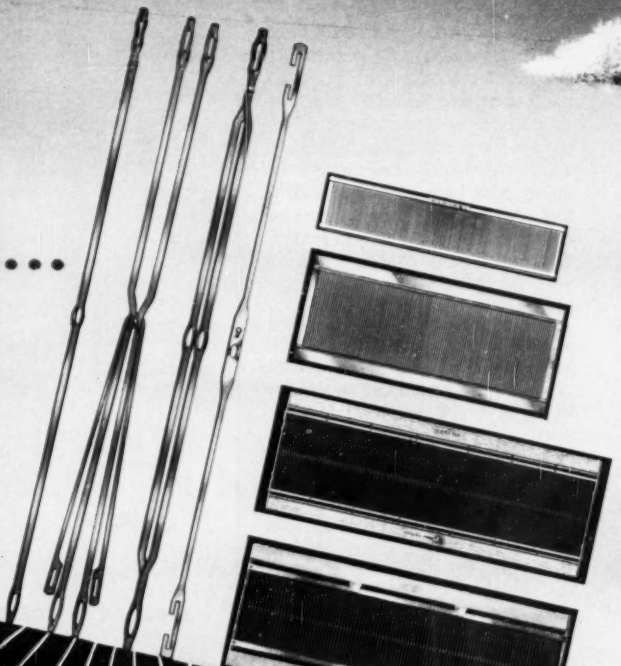
It is interesting to contrast these reports with reports from

(*Continued on page* 161)



ALL ALONG THE LOOM LINE...





QUALITY LOOM HARNESS EQUIPMENT

Speeds production . . . cuts rejects and builds profits. Specify them and be sure.

Ste-Hed-Co Flat Steel Heddles for every fabric. Made of high carbon and stainless steel. Specially designed Warp Eye and the finest finish and polish obtainable prevent jagging or breaking of the Warp Thread.

Ste-Hed-Co Loom Harness Frames for every requirement. Built with strength and rigidity to withstand the vibration of high speed production. Exclusive End Brace design and Superior Center Brace construction assure uniform quality production.

Ste-Hed-Co Rust Resisting Loom Reeds of all types. Made of high quality Regular and Stainless Steel with properly shaped and spaced dents.

Ste-Hed-Co Warp Preparation Equipment to grant Uniform Quality Beams. Guide Combs, Leasing Combs, Holding Combs and Hook Reeds for every need.

Ste-Hed-Co Loom Harness for all weaves, regardless of texture. A complete line of especially designed and patented Lock Hooks, Drop Wires, Harness Adjusters, etc.

Southern Shuttles of Tempered Dogwood and Fibre Covered for maximum efficiency on High Speed Looms of every manufacture.

STE-HED-CO Flat Steel Heddles · Loom Harness Frames · Loom Reeds · (Pitch Band and All Metal, Regular and Stainless Steel Wire) · Loom Harness Accessories · Southern Shuttles (Tempered Dogwood, Fibre and Persimmon Covered) · Drop Wires · Warp Preparation Equipment · Electrode Rods · (Fibre and Plastic Insulation) · Creel Stop Motions · Hard Chrome Plated Parts "*WEAVE THE WORLD'S NEEDS.*"

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AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Control Program

NO ONE has very strongly disputed the necessity of some type of controls over the nation's economy as we move into a period which has been described as one of the gravest in America's history. The textile industry is no less patriotic than any other industry, and it is entirely possible that it is more patriotic. It does insist, however, that in administering the control program, fairness and judgment must be exercised if our mills are to contribute maximum production to the current war effort and, furthermore, if they are to survive to help the country prepare for some future emergency.

Memories from Last Time

The memory of the last war is still clear in our minds. Men's shirts with bright orange stripes were available in every department store, but because of OPA's peculiar pricing system, it was almost impossible to buy, beg, or steal white shirts.

We remember, too, the strange and bizarre orders which came from the alphabet agencies in those years. Social planners and others who might be favored with a less charitable name were trying to run the textile industry, and the few good men who were on the staffs of these agencies found their efforts blocked at every turn. The outstanding production record of the industry was made in spite of OPA, CPA, etc.

How can we prevent that happening again? That, of course, is the question which back in August was debated through the day and oftentimes at night by the United States House of Representatives, by the Senate, and by the joint conference to which the control legislation was finally sent. In those days, everybody seemed to have a solution, and yet each solution proposed seemed intended to favor some particular group and to exclude the welfare of the nation.

The result of that wrangle is now history. The legislation is on the books. The die has been cast, and we must live with and under the law of the land. We can, however, as textile manufacturers, give freely of our time and our energies in trying to make certain that such voluntary and involuntary controls as we may be faced with are administered fairly and efficiently.

Our Part in the Play

It has always been difficult to induce able men to accept temporary or permanent positions with the government, because able men are not willing to stand for the red tape, the double talk, the inefficiency, and the deceit which so often characterizes operations of this nature. This is a time, however, when those dislikes must be put away from us and when each of us must realize that the future of this industry and the future of this country may be hanging in the balance.

This is a time when textile men of experience and ability are going to be needed to handle the affairs of our industry. It is a time when the money and planning which has gone into the organization of our trade associations begins to pay off. We need representation in Washington, and the quickest and most efficient way to obtain it is through our trade associations.

That, however, is not enough. Practical textile manufacturers are going to have to make countless appearances before boards and bureaus, and they are going to be scoffed at and vilified and their advice and their warnings are going to be scorned. But that must not deter us in our determination to do whatever each of us can do in what may be the brief respite before the fall of the first atomic bomb. Our petty jealousies become most insignificant in the light of that flash.

Raw Materials and Wages

There are those who have been telling us that the price of cotton goods can be fixed while wages and raw materials run wild. Generally speaking, those are the people who have never had to meet a payroll, who have never had to pay corporation taxes, and who have never had to face the necessity of replacing worn out and obsolete machinery from non-existent reserves.

Politically speaking, it is most unpopular to mention or even to refer to any sort of ceiling for wages or farm products. In fact, it is so unpopular that the teeth of many legislators chatter at the mere thought. Not to maintain some control over these items, however, is to toy with the fate of this nation.

In every country there are political opportunists, and America is no exception. To play politics now, however, is to play with something far bigger than the ward-heelers and coattail swingers which have become a common sight in our state capitols, as well as in what has been called the capitol of the greatest nation on earth. To play politics now is to commit treason.

Danger of Controls—Retaining after Emergency

This writer has never believed in the socialistic type of controls which for nearly twenty years in peace and in war have been advocated by those who have been shaping our destiny. It cannot be argued that in time of war we need no controls because all of us realize we must have them. We can insist, however, that those controls be administered fairly, that they be temporary in nature, and that at the earliest practical moment the power be taken away from the bureaucrats and given back to the people.

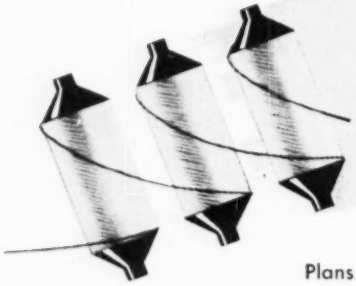
To administer controls fairly

★ COTTON

★ SYNTHETICS

Textile ENGINEERING

★ WOOL



Plans and designs for all types of projects related to the textile industry. Appraisals, modernization studies, machinery layouts, air-conditioning, power and water filtration plants and other phases of textile engineering.

ROBERT AND COMPANY ASSOCIATES

Architects and Engineers

ATLANTA

THIRTY-TWO YEARS' NATIONWIDE EXPERIENCE IN INDUSTRIAL AND TEXTILE DEVELOPMENT

from the standpoint of the textile industries, there must be some type of control over raw cotton and over wages. To administer controls fairly, there must be capable and efficient textile men working with the government.

It is an almost impossible task to clamp a ceiling on the economy of 150,000,000 people and expect all situations to be fair and all decisions to be honest and just. We can, however, strive toward that goal, and it is the duty of each of us to assert our strength as individuals and our strength as a part of the textile industry as we endeavor to see to it that our country wins the war and that our industry survives the peace.

Camouflage Netting

It is a far cry from talk of the war and of price and production controls down to a question such as the staining of cotton lint by camouflage nets, but this is something which should be called to the attention of every cotton manufacturer. It seems that in some areas of the cotton belt large quantities of multi-colored camouflage netting have been sold to gins at cut rates.

Apparently, this was surplus netting left over from World War II. It is entirely possible that some American artillery batteries might like to have this back, but it was evidently sold as surplus many months ago and now some gins have bought stocks of it.

This camouflage netting is being placed around the cotton bale at the gin and is serving in place of the bagging which is customary. Unfortunately, if this netting is exposed to rain or to the moisture which is frequently found in the freight cars and warehouses, the colors have a tendency to "run," and this dye goes through to the lint. The result of this is disastrous.

The Chairman of the Cotton Committee of the American Cotton Manufacturers Institute, A. K. Winget, has advised Institute members that in connection with the sale of cotton wrapped in this netting the question of the seven pounds allowance on cotton bagging may arise. He points out that Rule 37-A of "Southern Mill Rules" provides in part "when wrapped in cotton bagging that conforms, on a weight basis, to the present United States Government Standards for cotton bagging . . ."

Mr. Winget points out that camouflaged netting does not comply with these specifications, and therefore it does not qualify for the seven pounds allowance for cotton bagging.

If you have not already done so, no doubt you will want to call this to the attention of your cotton shipper.

Oct. 2-7—16th Southern Textile Exposition, Textile Hall, Greenville, S. C.

Oct. 11-21—International Exhibition of Knitting Machinery and Accessories, Granby Halls, Leicester, England.

Oct. 12-13—Annual meeting, North Carolina Cotton Manufacturers Association, Carolina Hotel, Pinehurst, N. C.

Oct. 12-13—Occupational Vision Congress (formerly designated Southeastern Industrial Vision Congress), Georgia Institute of Technology, Atlanta, Ga.

Oct. 16-20—38th National Safety Congress and Exposition, Stevens, Congress, and Morrison Hotels, Chicago, Ill.

Oct. 16-21—International Silk Congress, New York City.

Oct. 18-20—ASTM, Committee D-13, New York, N. Y.

Oct. 21—Annual meeting, Green Mountain Textile Overseers Association, Hotel Berwick, Rutland, Vt.

Oct. 23-25—Annual forum, Packing Institute, Hotel Commodore, New York, N. Y.

Oct. 26-27—Annual Convention, Carded Yarn Association, Carolina Hotel, Pinehurst, N. C.

Oct. 27—R. I. Section, AATCC, Providence Engineering Society Hall, Providence, R. I.

Oct. 28—Annual meeting, Piedmont Section, AATCC, Charlotte, N. C.

Oct. 28—Alabama Textile Operating Executives, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 28—Philadelphia Section, AATCC, PTI, Germantown, Pa.

Oct. 30—New York Section, AATCC, Swiss Chalet, Rochelle Park, N. J.

Nov. 1-2—Annual Conference, Pennsylvania Society of Training Directors, Community Building, Hershey, Pa.

Nov. 2-3—14th annual National Time, Motion, and Management Clinic (sponsored by Research Division, Industrial Management Society), Sheraton Hotel, Chicago, Ill.

Nov. 4—South Carolina Division, STA, Clemson College, Clemson, S. C.

Nov. 11—Eastern Carolina Division, STA, Erwin Mills, Durham, N. C.

Nov. 16-17—Annual meeting, Textile Research Institute, Waldorf-Astoria Hotel, New York, N. Y.

Nov. 17—New York Section, AATCC, Swiss Chalet, Rochelle Park, N. J.

Nov. 26-Dec. 1—Annual meeting, Textile Division, American Society of Mechanical Engineers, Hotel Statler, New York, N. Y.

Nov. 27-Dec. 2—19th National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York City.

Dec. 2—Piedmont Division, STA, Charlotte, N. C.

Dec. 9—Southeastern Section, AATCC, Atlanta, Ga.

1951

Jan. 12—New York Section, AATCC, Hotel New Yorker, New York, N. Y.

Jan. 15-18—2nd Plant Maintenance Show and Conference, Auditorium, Cleveland, Ohio.

Jan. 22-24 — Annual meeting, National Cotton Council, Hotel Buena Vista, Biloxi, Miss.

Jan. 22-26—10th International Heating and Ventilating Exposition (also known as the Air Conditioning Exposition), Commercial Museum, Philadelphia, Pa.

Feb. 23—New York Section, AATCC, Hotel New Yorker, New York, N. Y.

Mar. 29-31—2nd annual meeting, American Cotton Manufacturers Institute, Inc., Greenbrier Hotel, White Sulphur Springs, West Virginia.

April 28-May 20—International Textile Exhibition, Parc des Expositions, Lille (Nord), France.

April 30—47th annual meeting, National Association of Hosiery Manufacturers, Claridge Hotel, Atlantic City, N. J.

April 30-May 1—14th Hosiery Industry Conference, Claridge Hotel, Atlantic City, N. J.

April 30-May 4—Knitting Arts Exposition, Atlantic City (N. J.) Auditorium.

April 30-May 4—National Materials Handling Exposition, International Amphitheater, Chicago, Ill.

June 21—Annual Convention, STA, Mayview Manor, Blowing Rock, N. C.

JENKINS PRODUCTS---

Engineered for Progressive Mills

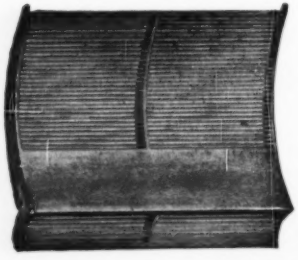
Jenkins spinning cylinders and card screens are engineered by men who for the past 38 years have pioneered *improved metal products* . . . for mills that have moved continually forward with higher quality at lower cost.

Today, more textile leaders are demanding Dynamically Balanced Spinning Cylinders, machined on exclusive Jenkins equipment to give smoother performance and more uniform yarn quality . . . Card Screens with advanced-design grid bars, and other Jenkins features which insure perfect screen settings.

Jenkins engineers are now pioneering the even-better products of the future. To be sure you're getting the *newest* advantages *first*, standardize on Jenkins equipment.

JENKIN'S *Dynamically Balanced* SPINNING CYLINDERS

All Machined Parts Precision Made In Our Own Shop



JENKINS METAL SHOPS

GASTONIA, NORTH CAROLINA

SHORTS and REMNANTS

This Month's Corn

Sign on dog food plant: "Our business is going to the dogs."

Sign on rear of Venetian blind truck: "Be careful Blind man driving."

Ten Years Ago

One of our representatives in the Middle West recently fell to reminiscing with the former advertising manager of one of our present advertisers; the ex-ad man had been away for 10 years. Said the ex-ad man: "Our company always thought the job your magazine did with the textile manufacturers problems was outstanding. Hope you are still doing that job."

That's our bread and butter; we'd better be. And it's nice to be remembered after 10 years. A compliment and a challenge.

Recipes

". . . .please give me the size formula used by American mills to size osnaburgs. . . ." —Foreign.

". . . .would like to get you to obtain recipe for okra fritters . . . if not too much trouble."

► Self-rising flour, mix with milk, season with salt and pepper, cut up okra. (Answer pertains to second letter.)

The Advertising Pages

Did you ever notice how many advertising pages you get every month in TI? They are an integral part of the book; if read carefully they enable one to keep posted.

Besides, they let the magazine continue to grow, but make it possible to keep the price of a subscription down to its low level.

Some years ago a very fine European textile publication arranged to publish an American edition. Carrying little or no advertising, the subscription price had to be set at $30 a year (as compared to TI's $2). Even though the European publication carried excellent editorial material, it could not compete with such magazines as TI. It went out of business.

Readers (most of them anyway) seem to like the ads. During the last war, when the soldiers received papers overseas with advertising removed, they complained that they were being short-changed.

Yessir, advertising has its place (and who are we to deny it?).

Neps Still in the News

"Will you please mail to me one of your tear sheets entitled, 'A Review of Literature on Neps,' as mentioned in the April, 1950 issue of TEXTILE INDUSTRIES on page 125."

R. W. WISE
Industrial Engineering Dept.
Deering Milliken
Greenville, S. C.

► Request honored same day received.

Slasher Brush Article Generates Interest

The above story on "Brushing Yarn at Slasher Aids Weaving" created a lot of excitement and interest in the industry (TEXTILE INDUSTRIES, August 1950, page 157, HOW OTHER MEN MANAGE DEPARTMENT). TI received many requests for additional information and a number of questions on the technical operation.

With the author's permission we are able to disclose that the article was prepared by D. W. Lance, 313 W. Sullenberger St., Malvern, Ark. Mr. Lance, in conjunction with another party, owns the patents on the device. At present no manufacturer has the manufacturing rights.

The author has used the brush for several years; says it makes the "yarn look like it had been singed, prevents shedding at the loom, and allows the filling to be staved up into the fell of the cloth with ease."

Mills or interested manufacturers may contact Mr. Lance.

Pants Too Long

"I just received your TEXTILE INDUSTRIES and am interested in the News Brief item 'What Made the Pants Too Long.' (July 1950, page 71.) Would you please quote me price on 500 reprints."

► Quotation sent. Incidentally, lack of humidity "made the pants too long."

Waste Reduction Still Going Strong

"I would appreciate . . . a copy of your booklet 'Waste Reduction and Control,' by Ben H. Crawford . . . would appreciate your advising the cost of approximately 125 copies of this reprint . . . "

LUCIEN WILLIAMS
Manager
Southerland Division
Graniteville Company
Augusta, Ga.

► The demand has been so great for Mr. Crawford's article that we were unable to supply 125 copies from our stock. However, Mr. Crawford had some additional copies at his office in West Point.

Reprint Supply Depleted

". . . article in May 1949 issue by Mr. Tucker of Talladega Cotton Factory on 'Industrial Engineering for the Small Plant.' Understand there are some reprints and would like to secure one."

WESLEY N. HAWKINS
Juliette Milling Co.
Macon, Ga.

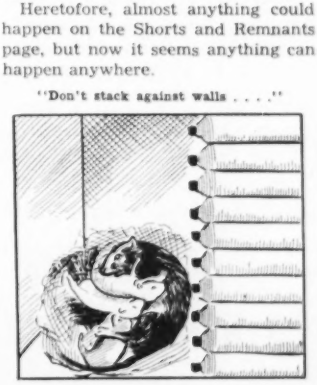
► Requests for this one have been enormous. Sorry, the supply is exhausted.

AW, RATS!

If the caption and picture below surprise you, just turn to page 97.

Heretofore, almost anything could happen on the Shorts and Remnants page, but now it seems anything can happen anywhere.

"Don't stack against walls . . . ."



Strength

Needle breakage costs money. That is why every Textile Spring-Beard Needle is strong at the butt, strong at the shank, strong at the beard . . . strong at every crucial point. The strength of Textile Needles is the result of a special steel formula, superior tempering, careful balancing of needle resiliency and needle length.

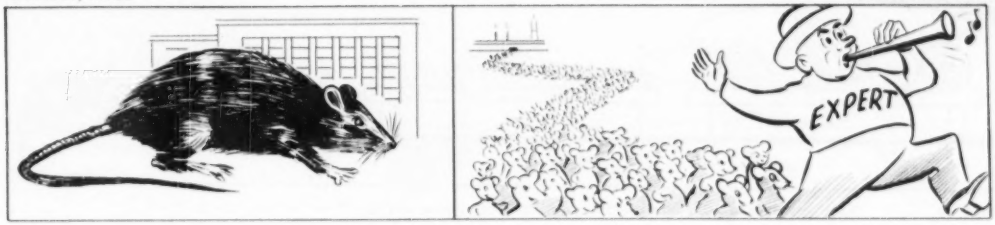
Strength is just one of the many advantages you get in Textile Spring-Beard Needles — advantages that add up to better fabrics, bigger profits.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting



Aw, Rats!!

Damage caused by rats can be reduced. Best to call in a specialist. Good housekeeping practices are essential.

EXCLUSIVE

Staff Prepared

ALL AN EDITOR needs for a lead to a story is for some mill man to ask him a question. When a superintendent asked us how other mills reduce damage caused by rats, the question started an investigation. The accompanying story is the result.

RATS CAUSE a lot of damage in a textile plant, and so far as we have been able to determine they fail to improve on the quality of the goods manufactured. One textile superintendent estimated damage at his mill to be between $7500 and $10,000 annually; that was when he tried to control rats without the aid of specialists. Since the experts have been on the job, the damage is negligible.

Rats and rat damage can be controlled, but unless the mill is willing to do its share by instituting certain preventive measures and insisting on good housekeeping practices, it would be just as well to learn to live with the rodents.

In the preparation of this article, information was secured from cotton and synthetic mills, bleacheries, knitting mills, and Orkin Exterminating Co., Inc., Atlanta, Ga. A hearty thanks to all for the cooperation.

The latest rat census brought the estimate that in this country there is at least one rat for every human; a further estimate is that a rat eats or damages two dollars worth of food or material in a year. Another conservative estimate indicates that loss in the U. S. due to rats is $189 million annually, but this was a pre-war and pre-inflation guess.

Don't feed the rats.

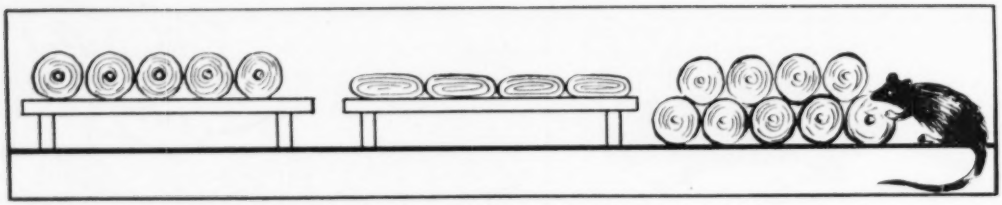
Irrespective of the exact damage due to rats, they cause considerable trouble to textile mills; and it is further believed that textile plants harbor more than their fair share of the one-per-person estimate.

Types of Damage. Damage from rats, as developed in our investigations, is caused by their nesting in bales of cloth, cutting twine for nesting purposes, fouling finished goods either by their unsocial acts or by wiping their dirty feet on the cloth, eating into starch bags and spilling the starch, cutting stock in process, and eating tickets off cartons (evidently to get the glue).

Although the foregoing are the more common types of damage, rats have also been known to make nuisances of themselves by biting employees, undermining foundations of buildings, nesting in headends of machines, getting themselves caught in the loom shed and being woven into the cloth, and eating the insulation off electric wires so as to cause fires.

They are also great collectors. Small machine parts from the supply room and lost valuables have turned up in rat nests.

Sometimes rats are not as conscientious as other animals about damaging property. Many animals only damage the goods or food they require for their own needs. Not so with the rat—he will cut a bale of cloth or through a box of yarn just to sharpen his



Rats gnaw to keep their teeth trimmed. Store goods off the floor to discourage them.

teeth. Perhaps the rat could be excused on the grounds that if he didn't keep his teeth properly ground, they would grow through the top of his mouth, or grow so that he could no longer close his mouth—rate of tooth growth in the rat is enormous.

The rat offers as the consolation to his existence the fact that mice don't usually inhabit the same territory—he eats them. But cats can serve the same purpose for mice. However, it is unwise to depend on cats to rid the place of rats. A good-sized rat can hold his own with a cat. Furthermore, dogs are too well-fed to be depended upon to serve as adequate ratters. Ferrets might do the job and go directly into rat territory, but the ferrets are about as much trouble as rats.

Poison applied properly has been known to be effective, but always present is the danger of killing pets. Some mills have tried red squill as a poison. This works as a temporary measure only, because if the rat is not killed with the first dose, the probability is that he will become tolerant of the poison and it will not disturb him later. Red squill is the safest poison to use, as far as that point is concerned; dogs and cats can vomit and eventually get well. Rats are unblessed with this accomplishment, being forced to retain the red squill until it either kills or "vaccinates" them.

Some mills claim they have expert trappers on their staff of night watchmen, who not only enjoy catching the rats, but do an exceptionally good job of it. Others contend that this is true only in part and that for every rat trapped by an amateur, twenty are running around the premises.

As concerns red squill, one mill man reported as follows: "We mixed red squill with hamburger meat and placed the meat balls throughout the plant. The rats were supposed to eat these balls and leave the plant to die. We missed the meat balls for awhile but couldn't tell that any rats were missing, so we began to look around. Instead of the rats eating these balls, they were ganging up and rolling them all together in one pile in some out of the way place. We discarded this plan."

Those were educated rats from Georgia. A knitting mill manager in North Carolina wrote, in answer to our inquiry: "We have tried and discarded several methods [of rodent control] as we find that the rats here in North Carolina are very intelligent and will not pay much attention to anything we offer them in the way of poison."

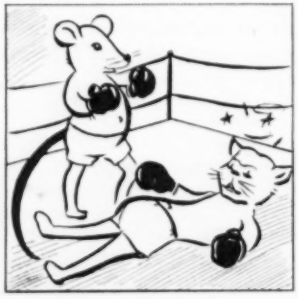
With evidence of such brilliance from rats in Georgia and North Carolina, we took the matter up with a textile man from South Carolina, a sister state. He felt that South Carolina rats were on an intelligence par with any rats anywhere, much less Georgia and especially North Carolina, but no substantiating evidence supported his defense.

Before we get too far into the control of rats, it should be explained that this discussion primarily pertains to the brown rat, at times called the wharf rat, barn rat, sewer rat, but coming under the broad classification of Norway rat. In this country also is the roof rat, sometimes called the black or climbing rat. The brown rat goes by the Latin name of "norvegicus" and the roof rat is called "rattus rattus" in the dead language.

The brown rat burrows or gnaws his way into the mill. The roof rat often gains his entrance by ascending the walls or crossing wires which enter the building. Both types cause considerable damage, but they appear not to be compatible with each other. However, one type may occupy the lower premises and the other the upper.

Both are difficult to evict from the property unless their habits are well known. As another mill man put it: "Rats are bad company. We have been working at rats for years. Our best fight has been to join with the city and county in really putting on a drive once or twice each year. We have not been successful where we tried simply to rid ourselves of rats at the mill property. If the

Rats hold their own with cats.



Rats eat mice.

town put on a drive and we did not, their rats came to us; if we put on a drive and the town didn't, the rats went to town. We now fight rats together."

To a rat, possession is nine points of the law, and the difficulty in convincing him of his undesirability as a tenant is in not knowing his habits. Even in a commercial organization, one man can kill more rats than another. There is no set pattern, so it is necessary to know all of the existing rules and tricks of the trade, using first one and then another as each becomes less efficient. The exterminator must know the habits of the rat, the food of each type, where to put the poison and how, and about as much about rats as the departmental overseer knows about his job.

Factors in Rat Control. For those who would make a study of rats, any number of publications are available [names on request]. But even the most experienced exterminators contend that rat control is an educational process for industry.

Good housekeeping is essential. Eliminate all food, such as lunch droppings in the mill. One exterminator reported finding food in practically every mill in which he worked. He contends that textile rats are among the best fed in the country.

Eliminate nesting places. Do not stack material or stock in process against the walls; rats build their nests in such places.

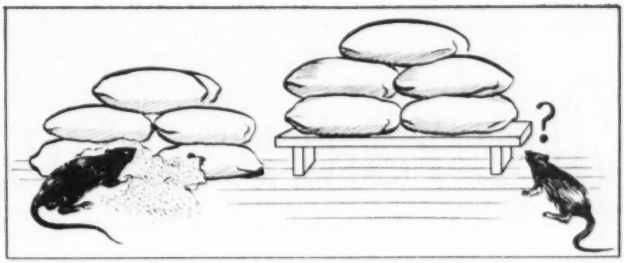
Store material off the floor at least ten inches. This discourages their nesting or jumping to the material merely to gnaw.

Rat-proof the outside walls of the plant with concrete, brick, hardware cloth, galvanized sheet metal and screens on doors.

Maintain outside premises in an orderly manner; stack lumber off the ground; permit no accumulation of debris for nesting.

Extend the housekeeping principles to the village where rats may be fed. Garbage should be off the ground and in closed metal containers.

Try poisoning or trapping if you wish. You may be successful. But based upon the experience of other textile mills, as expressed in response to our investigations on rats, call in a specialist. He will do the job at a reasonable fee, and you will have more time to run your mill while he chases rats.



Mill Experiences with Rats

Mill 1. Puts out poison. Rats are trapped by night watchman (all types of traps). Doors are rat-proofed. Holes outside of mill are blocked.

Mill 2. City puts out poisoned hamburger meat for nominal charge. Rats are worse in fall of year.

Mill 3. Before contracting with an exterminating company, endeavored to control rodents with own personnel, but found that, due to limited knowledge of the situation, mill was unable to control rodents successfully.

Mill 4. Tried for years to combat rat nuisance with own personnel; unsatisfactory. Now contract with exterminator and situation better.

Mill 5. Most satisfactory way to control rodents is to contract for outside service.

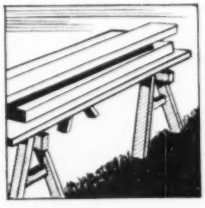
Mill 6. Scattered rat poison through the plant several times and found it to be beneficial. Problem is aggravated when employees throw sandwich papers or scraps of food behind rolls of cloth.

Mill 7. Exterminating company does a fine job in controlling rats.

Mill 8. Tried to suffocate rats by pouring pyrene into every notch and hole in a section of the plant to force the rats out into the open. Plan was ineffective.

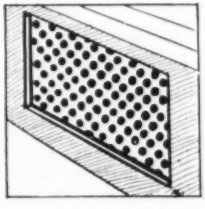
Mill 9. Cleanliness is important in reducing number of rats. Forbid dropping of lunch crumbs in the mill. Exterminators can be of valuable assistance.

Store lumber off ground.

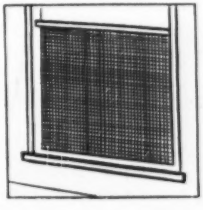


Use metal garbage containers.

Block entry from outside.



Screen doors and windows.



MILL PERFORMANCE CHARTS

— "We wouldn't be without them"

Staff Interview*

EXCLUSIVE

OPERATION PERFORMANCE charts when kept accurately and continually can teach some valuable lessons. Take the one on Card Neps shown on this page, for instance: It shows that from May 22 until June 5 there was an increase in the number of neps at the card. This rise in neps was caused deliberately by the mill. Cotton mixes which the mill's laboratory estimated would increase the nep count were fed into the opening machinery.

After determining that the mill could increase neps by running the cotton mixes which would cause an increase, a reverse procedure was adopted and the cotton mixes were changed to reduce the nep count.

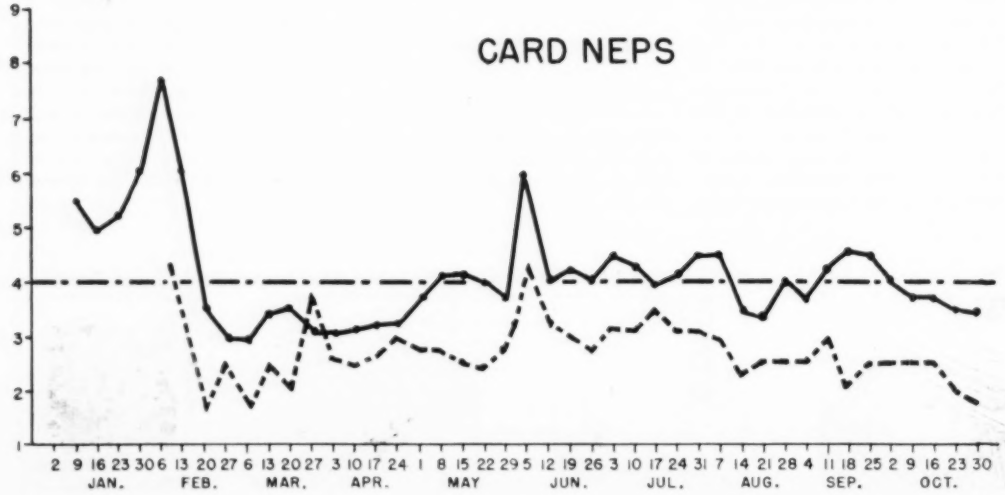
The point was proved. Using the knowledge gained, the neps were brought under control, where they have remained ever since.

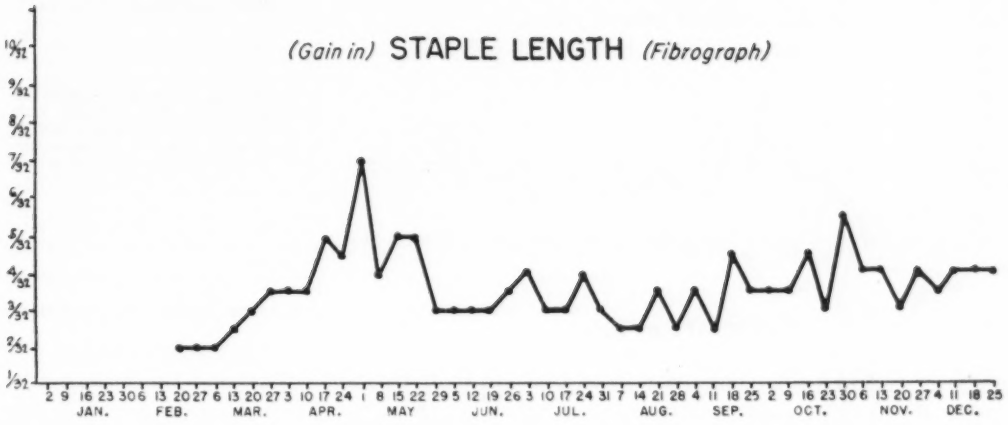
*This article is based on interviews with the general superintendent, technical superintendent, and laboratory chief of the quality-conscious Russell Manufacturing Company which manufactures yarn, cloth, and knit goods, and which does its own dyeing, bleaching, and finishing. Departmental supervisors consider the system an aid to them as well as to management.

Gain in Staple Length Chart Prevented Trouble. Another operation or control chart kept by the mill is Staple Length (Fibrograph). Each bale of cotton is tested for staple length, and the stock in process is also tested periodically. In this particular chart the recordings indicate the gain in staple length of the stock while it is being processed.

Ordinarily the cotton used by this mill will gain from 1/32" to 1/16" over the bale staple when the stock is run. However, the chart shows gains occasionally of

Acknowledgment: The editors acknowledge with deep appreciation the assistance rendered, in the preparation of this story, by A. W. Askew, in charge of Laboratory and Research, Russell Manufacturing Company, Alex. City, Ala.





STAPLE LENGTH (Fibrograph). See article for one use for chart. "Staple Length" on this chart means "gain in staple length when stock is processed over b.le staple length." Stock increases in staple length as it is processed. Note unusual gains in length; rolls must be adjusted accordingly. This chart is considered very important, by the mill management, for manufacturing process control.

as much as 5/32", and in one instance as much gain as 7/32" in staple length while processing.

This gain of 7/32" could have proved troublesome to the plant if the system of testing the staple length and recording it had not been used. When the gain was noted, any possible difficulty due to this cause was prevented quickly by opening the rolls on the slubbers.

Without this type of control, the mill might have tried everything under the sun, without success, but with the situation eventually clearing up when the stock was run out; but no one would ever have known what really solved the problem.

Having a finger on the manufacturing operations has paid off many times in such instances as the foregoing. This is only an example. Since the controls have been established there have been no periodic "blow ups" so common in spinning and weaving mills.

Charts Aid in Study of Cotton. The grading of cotton is an art, not a science. Some of the factors in selection of cotton are "feel," "bloom," "color," and "length of fiber." Cotton character can be soft, wasty, silky, fine, coarse, rough-rough, heavy or light backed, etc. With all of the various considerations that go into cotton grading for merchandising purposes, it is obvious that no scientific indicators have been evolved which permit the mechanical grading of the stock.

But many of the qualities of a cotton which cannot be determined by mechanical devices have an important bearing on the spinning qualities. So it is not surprising that the expert men who grade cotton are often deceived in regard to its spinning properties, and it often happens that cottons which are put into the higher grades are inferior than those graded lower (and vice versa) from the viewpoint of the manufacturer.

This is where testing, performance charts, controls, and close observation play their parts. The organization on which this story is based realizes the importance of fiber testing and laboratory research. It is working toward correlating certain fiber properties with mill performance and quality.

Although this systematic study is still in its infancy and is incomplete and yet to be conclusive, certain trends are indicated. It is recognized that mere grading by simply passing the cotton under the judgments of the expert grader, is not final; new cottons are now usually submitted to the more scientific tests and to practical demonstration in the mill.

The performance and control charts shown with this article are

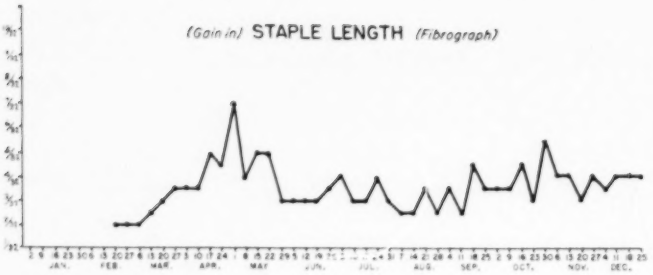
CARD NEPS. This is the chart referred to in the opening paragraph of the story. The lower (broken line) represents neps in the stock which have been processed only through the cards —not through opening and picking machinery. Samples of stock which will make up the mix are placed on the apron of the card and run through the card only. Neps are then counted in the card web.

The top line (solid) represents the nep count on stock which has been processed in the conventional manner, through opening, picking, and cards. The nep count is made from the card web.

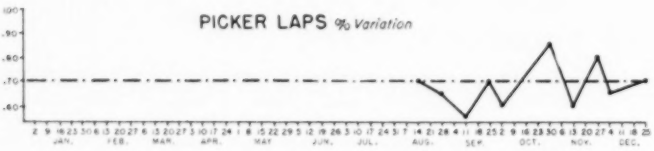
The mill interprets the two lines as indicating the neps made by carding alone, and by preliminary processing up to cards. (Processing through picking definitely makes neps in the cotton, according to the chart.) Dotted line is mill's standard.

Note point on chart (May 22) where the mill deliberately increased the nep count by changing the cotton mixes. On June 5 a successful attempt was made to reduce the nep count by again changing the mixes.

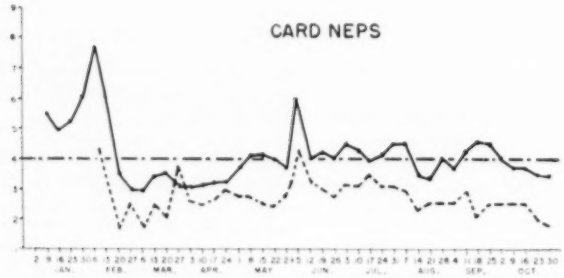
This experiment proved the point. From knowledge gained the neps were brought under control; have remained under control ever since.



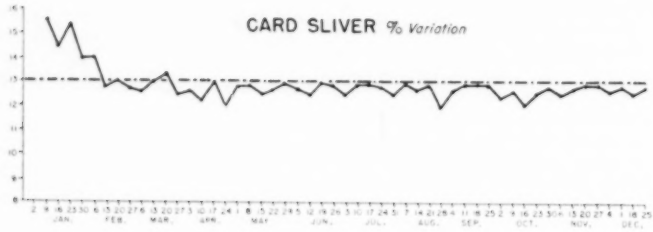
(Gain in) STAPLE LENGTH (Fibrograph). See article and chart on preceding page. Chart is reproduced again to indicate system used by the mill.



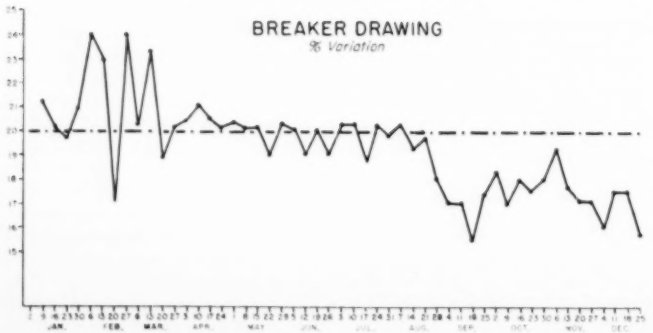
PICKER LAPS (% Variation)



CARD NEPS. Chart reproduced to indicate system used by the mill. See page 1 of story.



CARD SLIVER (% Variation). Solid line represents % variation. Dotted line is mill's standard. Averages on charts are for one week: these averages represent good and bad results.



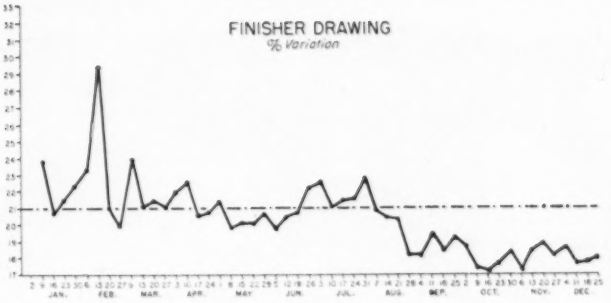
BREAKER DRAWING (% Variation). Solid line represents % variation. Dotted line is mill's standard.

Note

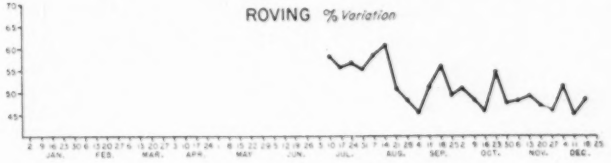
CORRELATION: Charts reproduced herewith were selected for illustrative purposes only and apply to more than one mill. No attempt should be made to correlate the charts appearing on these two pages. However, where the charts apply to one mill, correlation is possible unless corrective meas-

Performance Charts

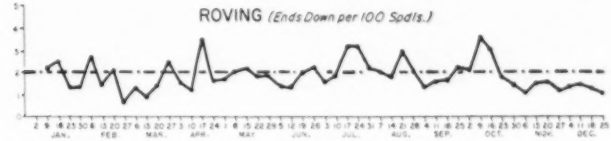
FINISHER DRAWING (% Variation). The chart emphasizes how sensitive this particular process is; also the importance of keeping the finisher drawing in excellent condition. As tests are made, machines can be checked closely to discover causes of unevenness. A wobbly gear on the drawing frame gives a definite pattern of unevenness and can be located by checking the machine. Other variation may be traced to loose gear, back lash in gearing, air pocket in cot, etc. Solid line represents % variation. Dotted line is mill's standard.



ROVING (% Variation).

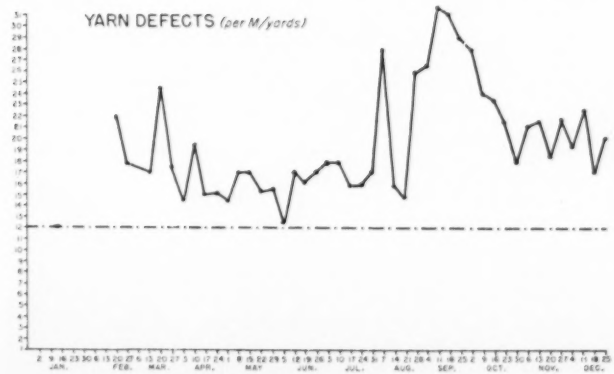


ROVING ENDS DOWN/100 spdls. Solid line represents ends down. Dotted line is mill's standard.



SPINNING ENDS DOWN/1000 Spdl Hrs. A definite relationship exists between evenness of stock in preliminary processes and ends down in spinning. There is also a relationship between yarn defects and card neps. Solid line represents ends down. Dotted line is mill's standard.

YARN DEFECTS per "M" Yards. Yarn on bobbins direct from the spinning frame is tested in the laboratory and posted as defects per 1000 yards. The mill designed a special machine so that from 16 to 20 bobbins are checked simultaneously.



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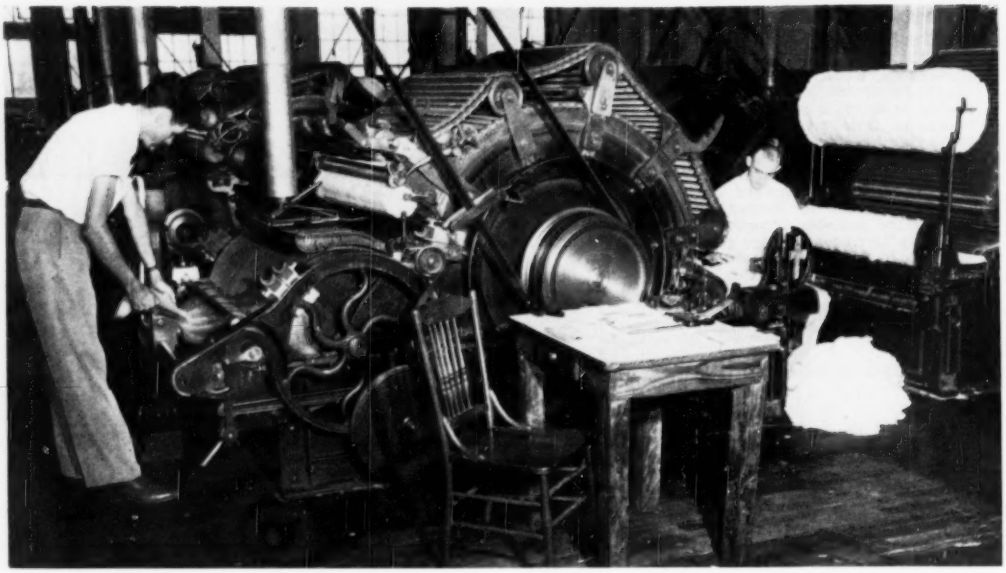
ures have been made. Corrections made in the early manufacturing processes usually prevent a definite pattern from appearing in the charts. Purpose of charts is to preclude the appearance of patterns from process to process unless results are up to mill's standard.



PROCEDURE IN MAKING HAND LAP on the card and counting neps. Stock has not been processed through opening and picking. Nep count in web from card is posted as lower line on Card Nep chart.

not all of those kept by the mill, but they do demonstrate in general the type of information that has proved valuable. The charts are studied for correlation; however, getting correlation of the charts is not necessarily important to the plant. If discrepancies are noted in earlier processing, these are corrected immediately.

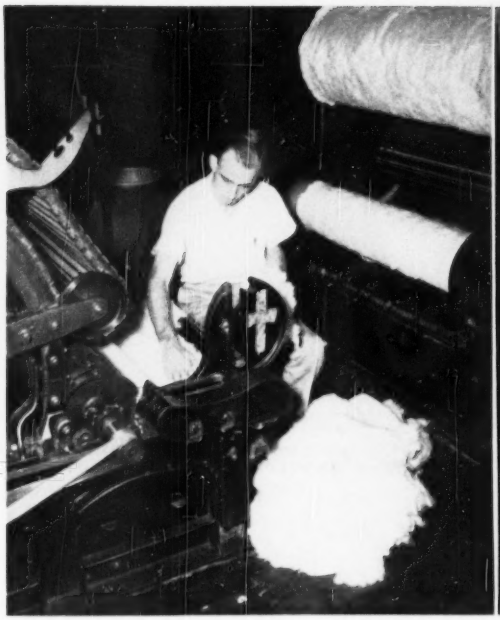
The mill prefers to correct at the source rather than to permit definite and correlated patterns to appear in the charts for the sake of argument. Thus the charts serve as preventive insurance. It is emphasized that enough tests must be made and at regular intervals to enable the various departments to get an accurate picture and to correlate the chart plotting where there is follow-through that can be correlated (See note page 102.)

YARN INSPECTING MACHINE which permits inspection of 16-20 bobbins of yarn simultaneously. Equipment was designed by the mill.

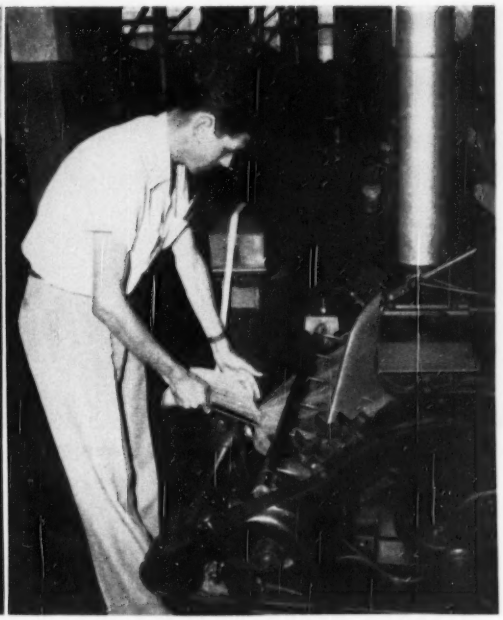
Study for Neps. The interest in neps varies with the type of goods being manufactured, but scientific research coupled with records of manufacturing performance can do much toward reducing neps to a minimum, or so this mill has found.

Tests are conducted by the mill's laboratory for fiber fineness, maturity, staple length, etc.; when the results of such tests are carefully plotted on graphs, they show a definite degree of correlation—and from such correlations much can be learned as to the fibers that give the best spinning qualities. To a certain degree the mill has learned how to control those factors which would ordinarily give a higher nep count or poor running conditions in manufacturing—but the methods used is another story.

A record of fiber properties can do much toward locating or explaining good running as well as bad running work. Charts which record such factors and results as



FORMING HAND LAP at the card. Work performed by laboratory and research technician.



REMOVING AREA OF WEB from card before making the nep count. See lower photo.

staple length, cotton neps, cotton fineness, variation in picker laps, card neps; evenness in card sliver, breaker drawing sliver, and roving; roving ends down/100 spdl, spinning ends down, yarn defects, etc., enable those responsible for quality to do a much better job because each phase of manufacturing is under constant observation.

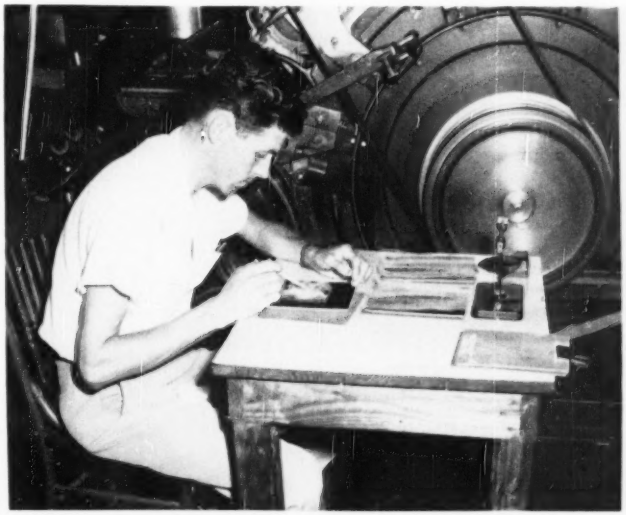
Laboratory Procedure. At this mill the schedules are made for the laboratory to receive materials to be tested. Each sample is carefully and correctly identified as to material and grade. All laboratory records are kept accordingly. Defective work is spotted instantly, and persons responsible for correcting defects are notified immediately.

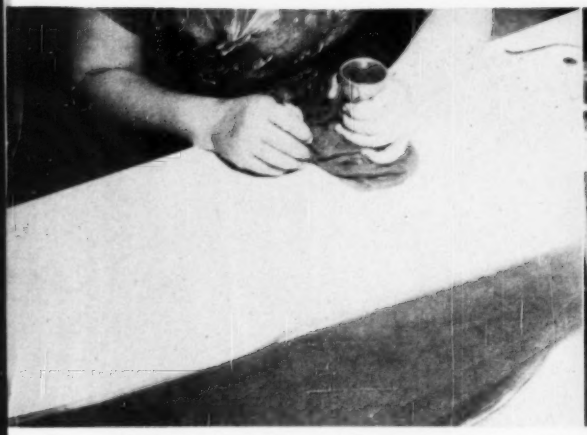
Increase or decrease in staple length of fibers is noted in the laboratory before the cotton is processed; therefore those lengths below and above set standards can be processed in any manner desired to keep them from affecting the quality of the finished product and the running of the various processes in the plant.

The mill has found that it is possible to increase efficiency in spinning and have fewer ends down per 1000 spindles and to increase weaving efficiency with fewer loom stops by carefully and scientifically selecting the fibers to be run together.

The well-equipped laboratory, the efficient staff, and adequate records have paid a good return at this mill by keeping a close control on all processes.

MAKING THE NEP COUNT while in the card room. Results of count are posted on the performance chart. Note necessary equipment.





Nylon stocking with one-inch snag is centered on the device's mending cup.

Pull thread is corrected by ordinary mending needle while stocking is on the cup.

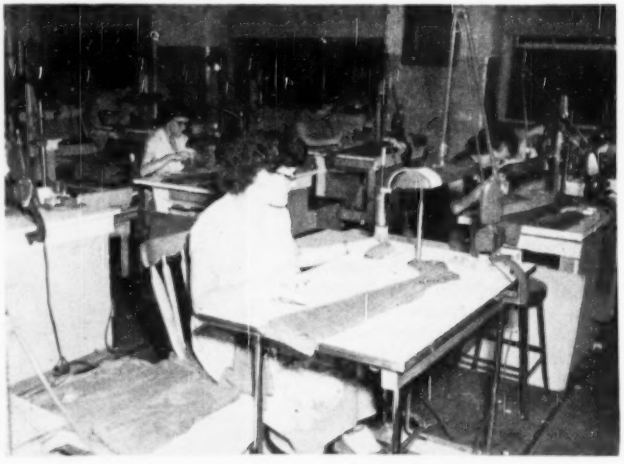
Thermoplastic Setting of Mends

RECENTLY introduced into the full-fashioned hosiery field, a thermoplastic process for mending pull threads has virtually tripled mender lot yields in one large New England mill. Called Thermset, the new patented method permanently and invisibly corrects snags on press menders.

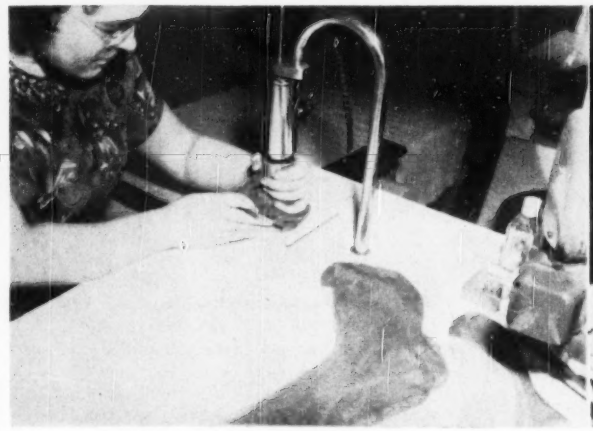
The process derives from nylon's ability to plasticize in various conformations dependent upon force and heat applied. After subjecting a corrected snag to this treatment, the repair is fused into position and is hardly detectable. Almost 100 per cent of the mended hosiery at this mill conforms with hosiery industry inspection standards for first quality. The only limiting factor in full recovery of mended stockings is the problem of pairing after the mending operation has been performed.

Staff Prepared

The Equipment. The equipment includes mending cup, bracket and heater element, and foot pedal with connecting rods for operating iron and mending cup lift. The entire thermosetting procedure consumes less than one second. The same cup on which the fabric is mended serves as a support during ironing operation which sets the mend.



MENDING OPERATOR presses on foot pedal which automatically brings Thermset iron into contact with fabric, while lift within mending cup applies pressure from below.



With corrected mend still in position, cup is placed under Thermset iron and fabric treated.

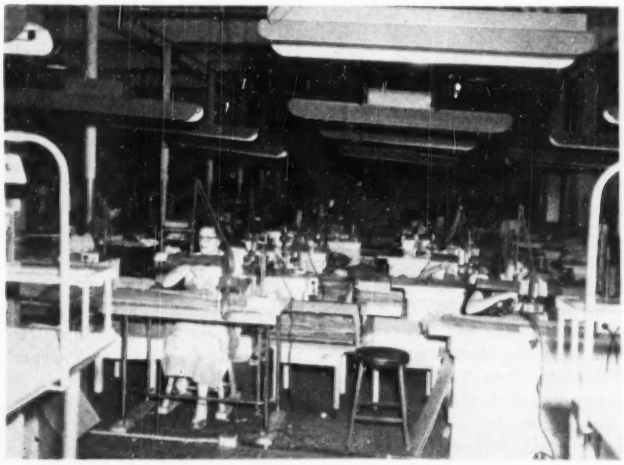
After the mend is treated, no trace of the mending scar can be observed.

Ups First Quality Hosiery Yield

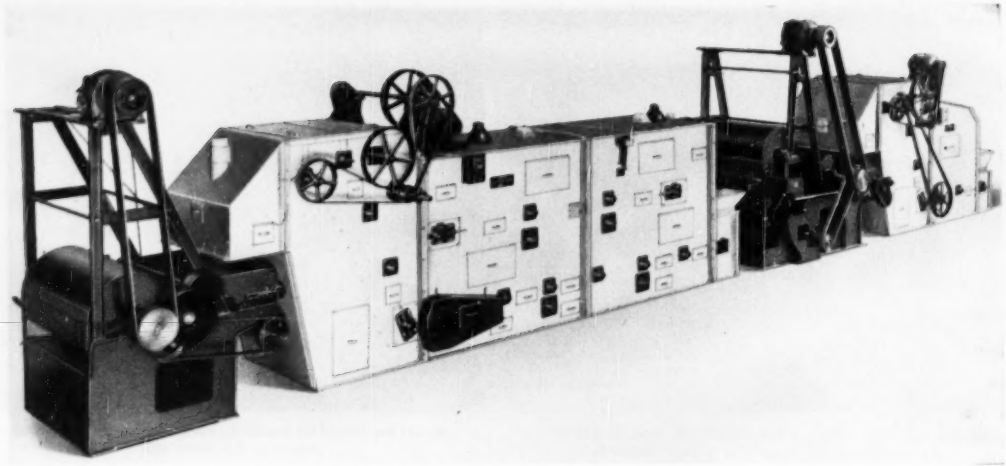
Twenty-five menders at this hosiery mill are equipped with the device. Between 15 and 25 dozen stockings can be processed per mender per eight hours. As an indication that no production time is lost due to the additional ironing step incidental to the technique, the management points out that "no extra help has been added to the department since the installation."

One of the principal advantages of the technique is that pull threads are corrected immediately and permanently, preventing creep-backs and distortion during subsequent handling. Furthermore, the responsibility for mending is now entirely with the mender which results in improved work. Mended snags were formerly passed to another examiner who would attempt to locate the mend and possibly repair it. This phase has been eliminated, permitting further economy.

The mill estimates that as much as $2.50 per dozen, the difference in price between irregulars and first quality, can be earned by this process. Where recovery of mender lots used to be about 30 per cent, the present range is up to 90 per cent (including pairing). The increased profits have been significant for this mill.



EACH MENDER is equipped with the Thermset instrument. Production time is estimated at one second per mend, allowing reclamation of 15 to 25 dozen first quality hose per mender per 8 hours.



FIBER BLENDING UNIT. Bales of fibers to be blended are laid down and stock is weighed and emptied into the feeder. Blending feeder delivers stock to cylinder opener which throws it onto double screens to form a sandwich mix. Sandwich is broken up by a whip-roll and thrown into opener. Blend is delivered to condenser.

Blending Synthetic Fibers

A review of some blending methods and a description of a blending unit which is meeting with success in a number of textile plants.

EXCLUSIVE

By ALLEN ANDERSON

TEXTILE INDUSTRIES magazine has published several articles on the blending of synthetic fibers, and of these with natural fibers, and we are now describing another system which has been in use for several years, and which has been found to do an exceptionally thorough job of fiber to fiber blending. There is a dual problem in the blending of any kind of textile fibers—one of these is to get the proper proportions of the various stocks to be blended, and the other is to get a proper fiber to fiber intermingling of these proportioned stocks.

Picker Laps. One of the simplest and most rudimentary ways to get a very accurate proportioning of stocks is to make laps from the different materials to be blended, and then to run these off on a finisher picker where the stock is being handled on the cotton system. If the breaker laps are weighed, the proportioning will be absolutely exact, but unfortunately the fiber to fiber mixing will be quite poor unless the stock is rerun through a finisher picker two or three times, which is a rather expensive procedure.

Another simple method is to make a floor mix which may or may not be carefully weighed out. Where a floor mix is big enough, it is often feasible to dispense with weighing out in small batches the stock to be blended, and to depend on the law of averages to equalize the proportions in the floor mix when the proper number of bales are laid out. The stock from this mix would be fed into a breaker picker, and the partially blended laps would be doubled on a finisher picker, or perhaps three-process picking could be used. If the floor mix is made with any care at all, this sort of blending would give a very thorough fiber to fiber mixture.

Floor Mix to Hopper to Bins. Another commonly used method is to put down a floor mix and feed this through a hopper, or series of hoppers, and blow the stock into bins; with or without a rotating or oscillating nozzle for distributing the stock in uniform layers all

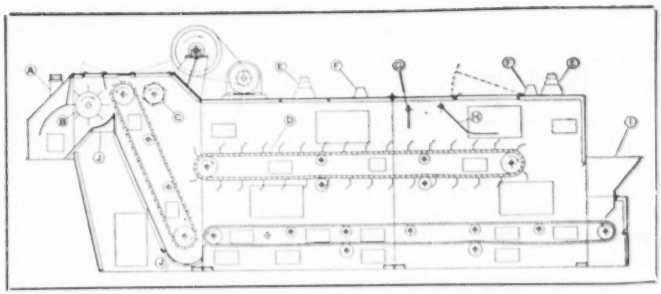
over the bin. Sometimes the floor mix is dispensed with, and the stock is fed directly from the bales into a battery of blending feeders. Bins have, however, several serious objections; the main reason for using bins would be to give the tint ample time to dry before the stock is fed to the pickers.

Where a battery of feeders is used for such blending, the stock can either be weighed out and fed to the feeders, or self-weighing feeders, such as those employed on a woolen card, can be used. Feeders of this type are very satisfactory where blends are fairly permanent and frequent changing of proportions is not necessary.

It is desirable to use single-process pickers for handling synthetic fibers because these can not only be operated with less labor than the two or three-process pickers, but the single process machines will make more uniform laps, and laps which have less tendency to split or fall apart. However, in order to use single-process pickers or intricate fiber mixtures, it is necessary to have extremely thorough blending of the stock before picking.

Blending Unit to Single-Process Picker. The blending system which is the subject of this discussion was designed to accomplish the thorough intermingling of the fibers before the stock is fed to the picker. The principle on which this blending system operates is that of the sandwich mix, and the blending unit builds a mechanically accurate, continuous sandwich mix as the stock passes through this unit.

Referring to the illustration, it will be seen that the stock to be blended is fed into a supply feeder which delivers to a cylinder type opener, which breaks up the masses of stock coming from the supply feeder and throws these up on the conventional double screen of a picker section. This blending unit is designed to handle the stock for one picker, and would therefore have a production of not over 350 pounds of fibers an hour. The cylinder beater acting upon the stock coming from the supply feeder operates at a speed of about 1000 rpm and is provided with more than 150 arms, so that every minute over 150,000 tiny bits of stock are whipped off of the sheet going through the feed rolls and thrown up on the double screens in sandwich form.



BALE-MIXING FEEDER. Sketch showing mechanism of Lummus bale-mixing feeder for use on synthetics.

As these double screens deliver the sheet of stock, this sheet is broken up by a whip roll and thrown into the bale-mixing feeder where the mechanical sandwich mix is to be built up. At this point where the opener is delivering to the bale-mixing feeder, the stock would normally be tinted.

Referring to the view of the internal mechanism of the bale-mixing feeder, it will be seen that the horizontal spiked apron catches everything thrown back from the pin lifting apron by the combing roll of the feeder, so that by regulating this machine to feed out about five per cent of the stock carried up on the pin lifting apron, and kicking back about 95 per cent, the stock circulates approximately 20 times before it is fed out of this bale-mixing feeder. Since there is almost constant replacement from the supply feeder and its opener, a continuous sandwich mix is built up in the bale-mixing feeder, with an average of about 20 layers of stock in the sandwich.

Tinting. The tinting is accomplished by using three atomizer heads with a spray so fine that it has practically no tendency to wet the stock. On account of the fact that the stock recirculates approximately 20 times in this bale-mixing feeder, this fine spray of tint is repeatedly applied as the stock circulates, and a very uniform shade of tint is applied to the stock, which is in a thoroughly opened condition so that the fine spray of tint can penetrate the loose fluffy masses of fiber.

The tinting system delivers stock to the picker almost dry.

The stock leaving the bale-mixing feeder is fed to another opener provided with a cylinder beater for the further intermingling of the fibers. This second opener may be used either with or without a screen section. Where exceptionally thorough blending is required, a double screen section can be used with the second opener for additional sandwiching on these screens. The stock is normally picked up from the second opener by an overhead condenser, which delivers it to the hopper of a single-process picker. In some instances where a room is large enough to put all of the machinery in line, there would be no overhead condenser, but this second opener in the blending unit would have a double screen section which would deliver into the hopper of the single-process picker.

This hopper on the single-process picker is provided with an automatic control rake and switch for starting and stopping the blending unit as required to keep the hopper properly filled. There is also a control rake and switch in the bale-mixing feeder for automatically controlling the supply feeder and its opener to keep the bale-mixing feeder properly charged. The constant maintenance of a proper charge in the bale-mixing feeder is essential to good blending.

Loading the Supply Hopper. The supply feeder may be loaded

by weighing out small batches of stock in a basket and dumping each batch in the feeder. It is quite necessary when this method is employed to completely dump the basket each time. It is not practical to weigh out a large box full of stock and feed from this into the supply feeder, because it is necessary to always have the exactly correct poundage of each stock going through the blending unit at any given time.

Some users of this equipment put down a floor mix behind the supply feeder of the blending unit and feed from that mix, but generally speaking, the stock can be weighed out in a basket in about 50 or 60-pound lots, and then dumped in the supply feeder, after which the operation is entirely automatic.

This blending unit is particularly designed for feeding one single-process picker, and it is recommended that each picker in the mill be provided with its own blender, so that the utmost in flexibility is obtained and the smallest amount of changing must be done. In a mill with three or four pickers, each of which has its own blender, it is usually possible to reduce the cleaning and changing time considerably. Even where only one picker is used, and all mixes must be put through that single machine, the cleaning time with this blending unit is not excessive.

The bale-mixing feeder is provided with flood-light receptacles and clean-out doors at every point where stock would have to be picked off of an apron or a shaft. There is no point in the machine which can not easily be reached through these clean-out doors.

In starting up a new blend with this unit, the bale-mixing feeder should normally be properly charged after one lap has been made on the picker, and since the first lap is nearly always set back anyway, the unit is usually ready to deliver well-blended stock by the time the lap weight is adjusted and it is possible to start making laps for the cards. The first lap taken off of the picker would be torn up and thrown back in the supply feeder of the blender.

Alternate Machine Layouts. In those unusual cases where a mill with several pickers runs only one or two mixtures of stock, a battery of blending feeders followed by a mixing feeder may be used for preparing the stock for the pickers. If it is desirable to have each picker operating independently of the others and where floor space is limited the synthetic fiber blending unit serves the purpose.

There are a few instances of users employing this blending system to feed breaker pickers followed by finisher pickers, but for any ordinary sort of blends, the single-process picker should be quite satisfactory. On some blends containing a very small percentage of some diverse fiber, it might be necessary to use the two-process pickers in order to get this odd fiber properly scattered throughout the lap, but it would be a very unusual blend which would not have a sufficient percentage of each stock to make blending with this system satisfactory.

In a typical installation of this equipment the blending unit is ranged alongside of a single-process picker, with the back of the blending unit in line with the calender of the picker, so that one man doffs the picker and also weighs out the stock and feeds the blending unit. The entire operation is automatic from the moment that the stock is dumped into the supply feeder until the finished lap is taken off of the picker.

The blending unit described is manufactured by Aldrich Machine Works, Greenwood, S. C., and Lummus Cotton Gin Co., Columbus, Ga.

Big Retailers May Change Tactics

Since last spring most of the larger retail outlets are reported to have closely examined their merchandising policies, with the aim of eliminating unproductive expenses as far as possible and placing their earnings on a more substantial foundation for the future. In the knitwear field this development has been noted with approval.

Observers figure that the department stores, mail order concerns and leading variety chains certainly stood in need of a new appraisal of their merchandising methoc.. Some observers hope this movement will go much further.

They point out that since the last war ended, many big retail outfits not only have been careless as to where they pitched their promotions from the net profit angle, but they have often been unduly extravagant in promotional outlay for advertising and other selling expenses. Some critics have claimed that many of the larger general merchandise stores went back again into the groove of the olden-time "wayside bazaar." They offered hundreds of items, but could actually merchandise only part of them profitably, on the basis of worthiness of the merchandise and satisfaction for the customers.

It is an old saying among merchants that "good will, like a good name, consists of many acts, and is lost by one." Over the past months, majority of large retail outlets took advantage of easy credit terms allowed by our government, to the end that "big ticket" items sold on the basis of no-down-payment and very easy terms thereafter have been publicized and disposed of on a very wide scale; whereas, cash-sale soft goods (including knitwear) failed to receive adequate patronage by the retail stores' promotion-planners.

Some knitwear veterans say the time is now here when all types of retailers will need all the customer good-will they can get. This can be had more often, it is claimed, by concentrating on the type of buyer who is not already "up to his neck" in debt. Into this category, cash-sale knitwear fits well.

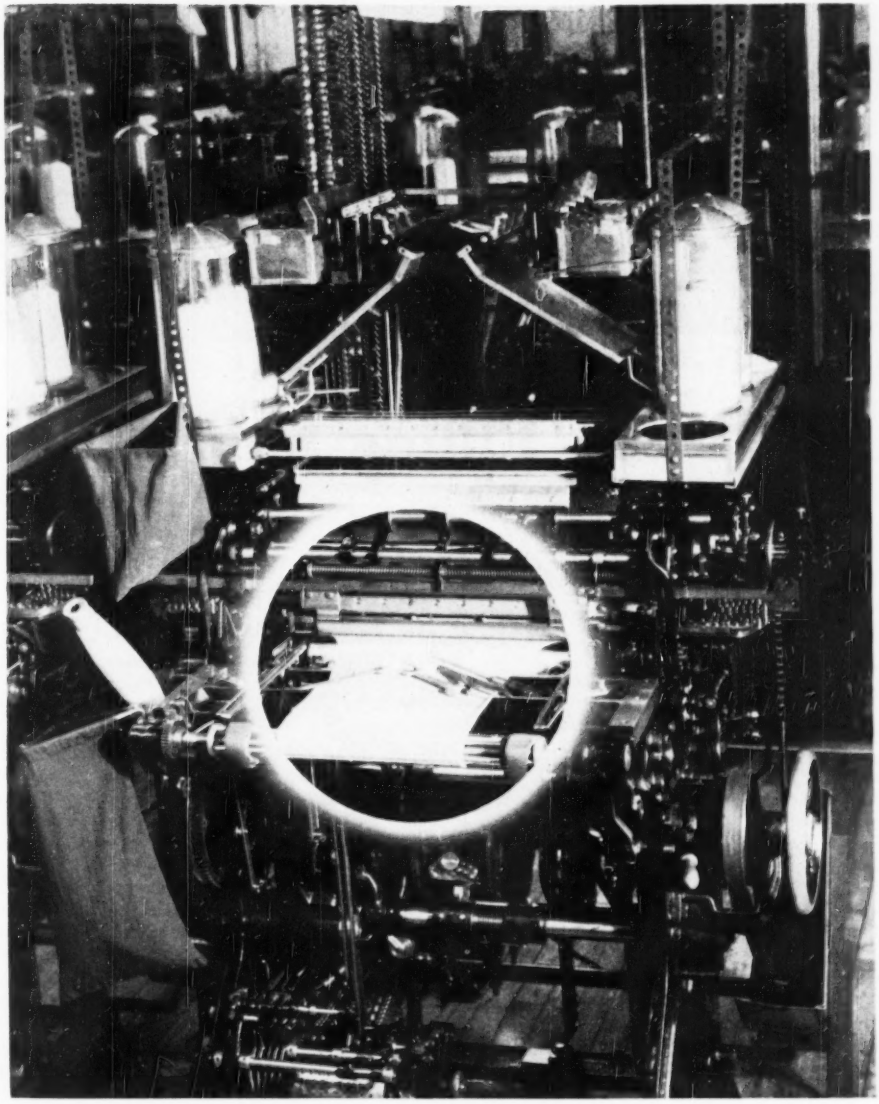
Knitter Hints No. 34

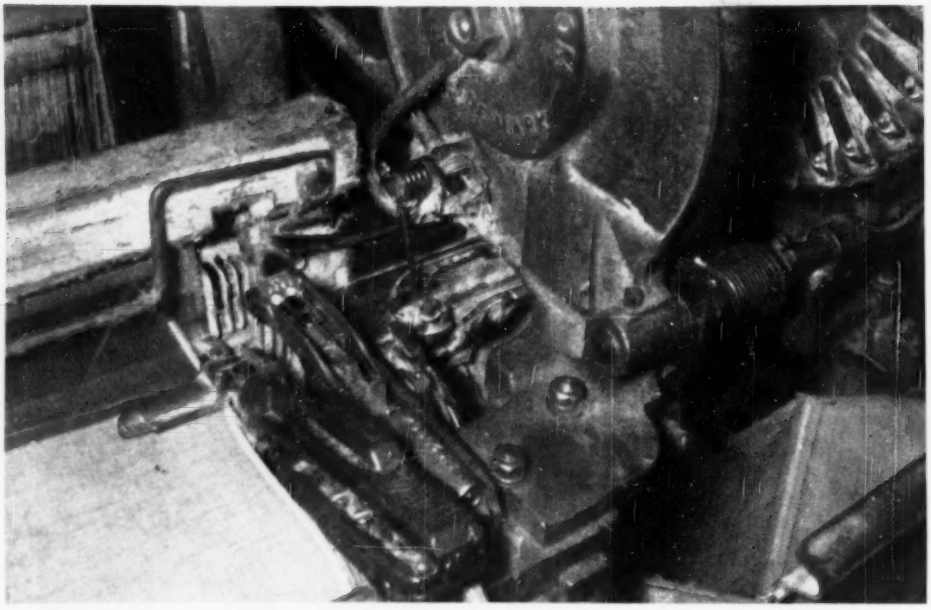
Prevent Pull Threads at Knitting Machines

This Knitter Hint appears through cooperation of Charles O. Simms.

EXCLUSIVE

DON'T lay your tools on a stocking!! The result—PULL THREADS. Spot-check all employees to determine who is making pull threads and how they are doing it.





RIGHT HAND FILLING STOP MOTION installed. Lay end is cut off to make room for filling fork well. Note alterations on back box and hopper stand. Illustrations on opposite page are close-up views of other alterations.

Right Hand Filling Stop Motion

Applied to:

36″ E-Model (plain) looms
40″ E-Model (dobby) looms
40″ K-Model (dobby) looms

OUR MILL had seconds running high from thin places and mis-picks. To reduce these seconds, we have installed right hand filling stop motions on our 36-inch E-Model (plain) looms, our 40-inch E-Model (dobby) looms, and our 40-inch K-Model (dobby) looms.

The result has been that mis-picks and thin places have been reduced from 12% to 4% on looms having the right hand filling fork, while those looms which are not so equipped have continued to run high in seconds, despite every special precaution taken to reduce the seconds.

Originally we thought that to be able to install a right hand filling stop motion on the looms, a great sacrifice would have to be made in reed space—reducing it so that narrower goods would have to be woven. However, this was not true because by carefully calculating the space necessary to make the change, the right hand stop motion can be successfully installed on any of the looms mentioned without reducing any of the reed space.

The Installation. Only a few special parts are required. The right hand lay end is cut off 1⅝″ to make room for the filling fork well. The back box is cut off to allow room for the filling fork rack.

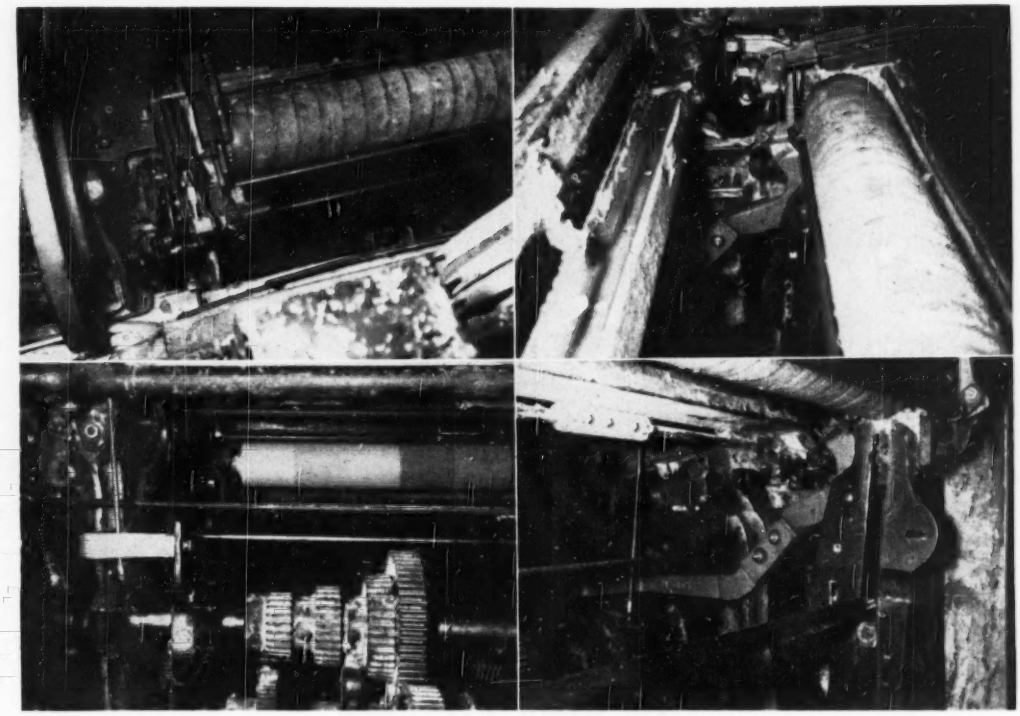
Then the hopper stand is cut off at the base so that the filling fork stand can be installed on the breast beam, permitting the filling fork slide to be set in line with the filling rack.

After getting the filling fork stand installed and aligning the slide and fork with the rack, it is then necessary to offset the top part of the filling cam follower

EXCLUSIVE

By C. A. GUNN

Asst. Supt. Weaving
Russell Manufacturing Co.
Alex. City, Ala.



hub so that the filling motion fork will be in line with the center of the filling fork slide.

To get around the pick clock drive on the cam shaft, the cam follower arm is offset so that it will work around this drive. Only a minimum number of alterations need be made in the changeover.

We realize that every weave room superintendent does not have a need for a right hand filling stop motion, but those who do find it necessary will be able to use this change-over to advantage.

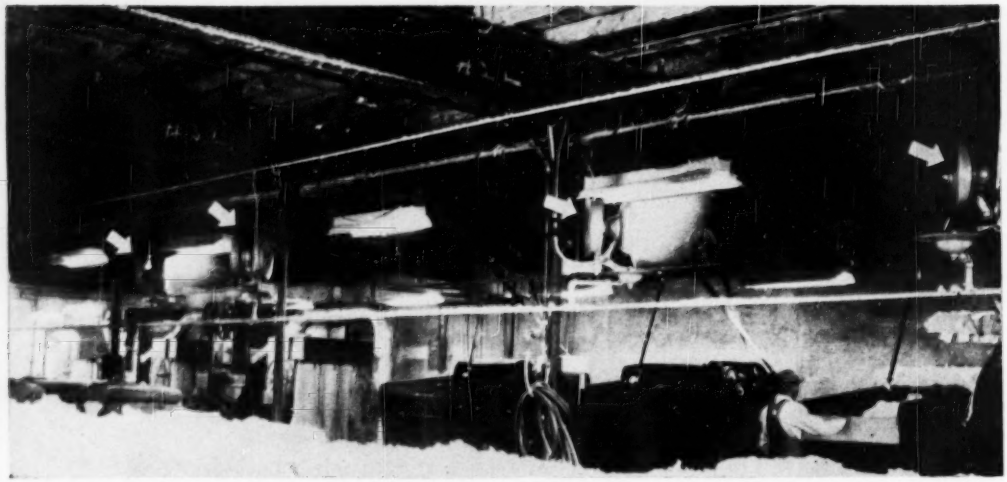
Textiles for Civilians Subject to Delay

A contract clause, drawn by the Industry Committee of The Association of Cotton Textile Merchants of New York, covers several delivery contingencies for textiles going to the civilian trade. It notes that delivery depends on seller's ability to meet civilian needs as it may be affected by government requirements, or possibly by government regulations. Delivery likewise depends on extent of seller's acceptance of government contracts. The ability of seller to obtain raw materials or other supplies is a condition affecting fulfilment of delivery. Specific rights of buyer and seller are reserved under stated sections of the Standard Cotton Textile Salesnote in the event deliveries are so impeded.

Commenting on the new clause, Saul F. Dribben of Cone Export & Commission Company, Inc., committee chairman, stated that it was "the initial step of the committee in seeking to assure that government needs resulting from the war in Korea are met in full and on time. The industry," he said, "has prided itself at all times on its response to national defense needs. Customers of the industry share this pride," he said, "and I am sure will be in entire agreement with the objectives sought."

It was pointed out that at no time has there been a question of precedence of military over civilian business. Full support of the military was given in the last war both before and after formal government priorities were established. Delivery problems were handled effectively under the existing clauses of the Standard Cotton Textile Salesnote and Worth Street Rules. The Korean War is a limited war and unusual conditions exist.

Thus it is the feeling of the Industry Committee, barring a widening of hostilities into a world conflict, that government priorities should not be necessary for textiles.



BALED and unbaled stock is stored in the opener room where humidifiers condition the fibers to some extent before it enters the processing machinery.

Humidifiers in Opener Room

Aid Other Processes

Staff Prepared

EXCLUSIVE

TO MAINTAIN more uniform moisture content in picker laps, Covington Mills, Covington, Ga., has a humidifier system in the opener room to condition the cotton stored and processed in that room. Controlling moisture content at this process minimizes the need for altering drawing frames to obtain uniform sliver, according to the superintendent at this plant.

Drawing sliver is affected by the difference in weight caused by variations in humidity, especially in opening. The advantage of controlled moisture in the opener room is in obtaining a uniform weight of moisture in picker laps so that the weight of stock in other processes can be controlled with minimum gear changes to compensate for different weights as the natural (outside) relative humidity varies.

The objective is to feed the same percentage of cotton and the same percentage of moisture through each operation instead of allowing the moisture content to vary, thereby causing a fluctuation in the weight of cotton actually fed. In this instance, the mill has attained more uniform yarn by controlling humidity in the opening room.

Cleaning Not Affected. Humidifiers in the opening room do not materially affect the extent or amount of cleaning done by the opening machinery. The cotton has a more uniform appearance after cleaning and is cleaned as well as it would be if the humidity were allowed to vary with changes in the natural atmosphere

Lap Variation. Under extreme fluctuations in the atmosphere, a 50-lb lap may vary as much as 3.5 pounds in moisture content.

An example which may illustrate lap variation caused by atmospheric changes is as follows:

50 lb cotton in lap
08% moisture content

4.00 lb moisture

50 lb cotton in lap
06% moisture content

3.00 lb moisture

The foregoing calculations indicate that some measure must be taken to compensate for the difference in the amount of moisture present in the cotton as it leaves the opener room; however by controlling humidity in the opener room, no such compensation is necessary.

An interesting experiment was conducted in this mill, wherein a sample of cotton was weighed every hour (8 hrs/day), every day for two weeks. The weight of the sample varied, due to atmospheric changes, from 35 to 47 grains. Similar changes occur in the opening room where relative humidity is not controlled. The management at Covington Mills decided to maintain 60% relative humidity in the opener room.

Practical Aids in

Quality Control at Hardwick Woolen Mills

Precautions taken to forestall root causes of poor yarn and second quality fabric in each manufacturing operation.

Staff Prepared

EXCLUSIVE

TO MAINTAIN stock in the most pliable and workable condition possible, Hardwick Woolen Mills employ humidity control in all processes from carding through weaving.

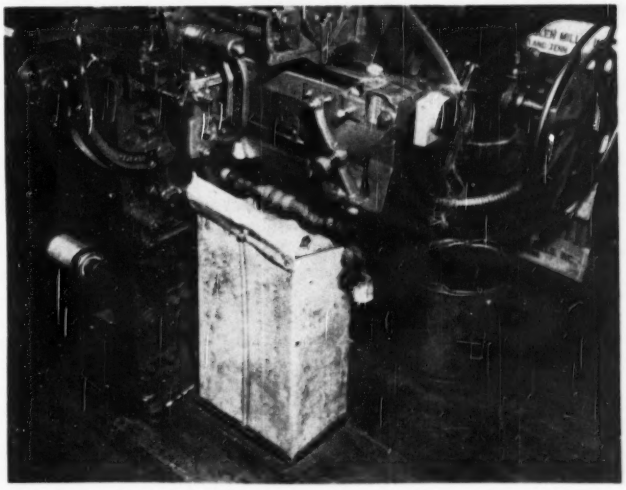
This mill utilizes three methods for removing vegetable matter from the wool; whereas many mills use one method. All raw stock is carbonized; Peralta rolls are utilized on all cards; and piece goods carbonizing is employed as additional protection against shives appearing in the fabric. Four cylinders are employed on each set of cards for better work, and eight mules have been retained for spinning extra fine work.

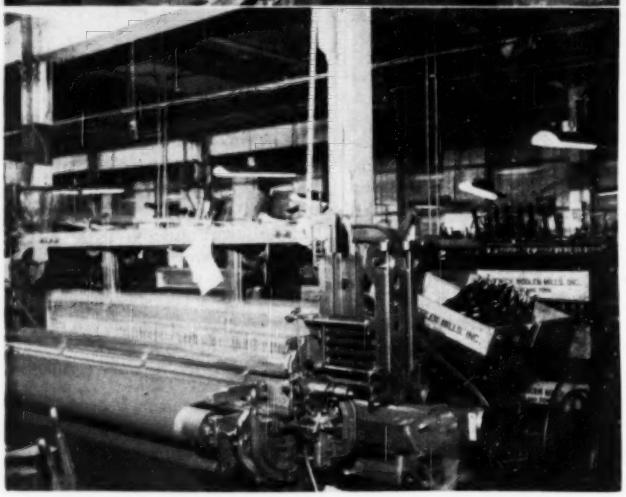
Weaving. In reducing second quality yarns and cloth, all filling is rewound on quills to minimize slubs and knots, and to obtain more uniform tension for quality. Two lights under each loom help show up mispicks and defects woven into cloth on C&K W3 looms. The lights are placed on the floor between the crankshaft and the warp beam and at each side of the loom. Bobbin crates help keep filling from being mixed and damaged, and each crate of filling is tagged for easy and correct identification. On each loom, a bunch remover for winding filling from ejected bobbins reduces waste handling and cleaning bobbins when they are taken from the looms.

Inspections. An inspection at every process assures quality yarns, and particular attention and inspection is undergone after the cloth is woven. The cloth is examined on two new perches immediately after it leaves the looms so that looms producing faulty work may be tagged without delay. This process is in lieu of allowing the sewing operatives to do the first inspection. Cloth accumulates sometimes at the sewing perch, and since the time element is important in quality control, the two new perches help stop the faulty work in the beginning before the looms have had time to make a large quantity of bad cloth. After the fabric has been sewed and burlers have inspected the cloth, another inspector checks the work before the finishing operations start.

Wet Processing. In all wet processing, time-temperature, and acidity and alkaline concentration are closely controlled. Automatic controls are utilized to regulate time allowed for temperature to reach a given point and remain there for the process. These instruments keep a recorded chart as a check on each operation. Acid concentrations in carbonizing are controlled carefully, and the tempera-

A bunch remover for winding filling from ejected bobbins reduces waste handling and cleaning bobbins when they are taken from the looms.





ture reached in the carbonizing oven is considered vital.

Alkalinity controls are utilized to observe operations at the neutralizer and continuous washer. Water processing equipment assures uniform softness in the water supply used in wet processing.

The finished goods are sponged and decated to take care of shrinkage and hand of fabrics. This measure is taken to prevent the cutter from taking a loss on goods not sponged to prevent shrinkage.

●

Top photo, all filling is rewound on quills to minimize slubs and knots and to obtain more uniform tension for quality. Bottom photo, quilled filling is placed in crates to prevent tangles, bruises, and mixed filling. Each crate of filling is tagged for quick and easy identification.

●

Posting Reworkable Waste Brings Reduction

MANY mills today are continually in search of methods to reduce the reworkable waste. This waste seems to be most excessive at the drawing frames. At one mill a weekly waste report on all types of waste throughout the mill is made and gone over at the regular weekly overseers' meeting.

A short time ago in one of the overseers' meetings it was suggested that each individual operator's waste be weighed separately. The methods engineer was called in to carefully study and see how this was going to affect job set-ups. He worked out a form that would be posted on the bulletin board, which is beside the drawing frames, and the waste of each operator would be posted on this form daily at such time as the waste was weighed up. This made it necessary to weigh the waste at the end of each shift.

At the end of the first week, with this new method in operation, it was found that reworkable waste had been reduced by 20%. This represented an appreciable improvement, but the reduction was only a very small portion of what could be done. The supervisors and methods engineer then went to work with each individual operator and the amount of waste was reduced by 33%, which of course is a large gain.

The reason the operators responded so readily was due to the posting sheet. These men are now comparing their individual abilities which creates a healthy and constructive condition.

TRANSPARENT cellophane bags provide protection and permit easy identification and inspection of small renewal motor parts. Reliance Electric and Engineering Co. packages parts in cellophane bags which are then packed in boxes or cartons for shipment.

Minimize Downtime by

Stocking Motor Renewal Parts

STOCKING a complete supply of motor replacement units or essential components assures increased maintenance efficiency and decreased equipment downtime due to machine failure. This article reviews some of the economics and mechanics of such a program.

By WILLIAM G. HALL

Manager, Renewal Parts Department
Reliance Electric and Engineering Company

EXCLUSIVE

SYSTEMATIC maintenance has demonstrated its economic value by minimizing equipment breakdowns and electric motor failures in the textile industry. Such measures as periodic check-ups and proper lubrication are now universally established as good motor maintenance practices, and stocking an adequate supply of spare units for motors driving vital production equipment is rapidly commanding greater attention in mill management and maintenance.

Experience indicates that a sound replacement program, formulated in terms of the individual mill's motor usage requirements, frequently proves a profitable investment in that it establishes protection against crippling work stoppages or costly interruptions caused by mechanical troubles.

Why Stock Motor Parts? Stocking an adequate supply of replacement parts increases the economic values of motor maintenance, and equipment downtime is substantially reduced. Replacements or repairs can be made quickly when trouble occurs, enabling a machine to be put back into productive service with the least possible delay and loss of production.

A continuous maintenance cycle with unit replacement as the cornerstone can be set up, making trouble-shooting in advance completely practical. Performed on a regular time schedule, maintenance so scheduled can go a long way towards further limiting out-of-service losses entailed by operational failures.

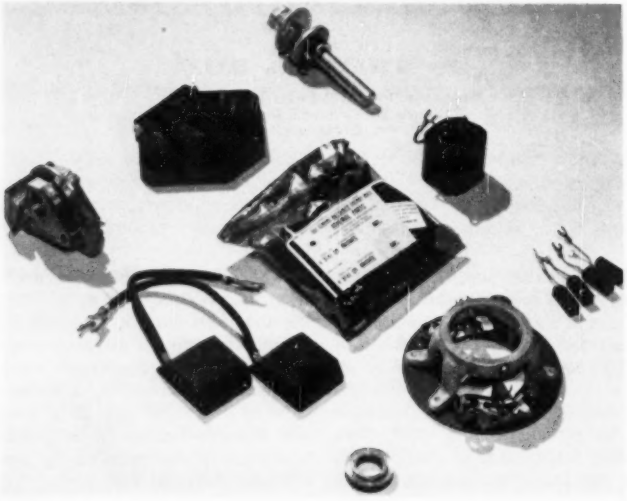
Factors Favorable to Stocking Motor Renewal Parts

1. Keeps downtime of production equipment at a minimum.
2. Promotes better repair work by enabling job to be handled at more convenient intervals, reducing overtime in repair department.
3. Greater protection of production schedules.
4. Higher employee efficiency by minimizing disruptions caused by mechanical trouble.
5. More positive insurance against costly interruptions caused by parts failures.
6. Quick unit replacement or parts repair.
7. Expedites good maintenance on a continuous basis, thereby promoting maximum economy through reduction of out-of-service losses.
8. Stocking complete unit assemblies for interchangeable machines on critical production equipment reduces delays caused by breakdowns.
9. Ready supply of parts or complete spares when and where needed.
10. Stocking parts is justified when cost of equipment downtime and production losses exceed cost of stocking parts.

Factors Unfavorable to Stocking Motor Renewal Parts

1. Limited amount of production equipment in use.
2. High investment in inventory of complete unit assemblies or loss in essential spare parts.
3. Setting up and maintaining proper stock control system.
4. Low factor of machine usage.
5. Adequate stocks maintained and prompt delivery service provided by source of supply.
6. Lack of sufficient storage space, which is now at a premium in many mills.
7. Stocking parts is not justified when the cost of stocking parts exceeds cost of equipment downtime and production losses.

SAFEGUARDING motor parts against possible corrosive deterioration in storage at the user's plant calls for protective packaging by the parts manufacturer. Carbon brushes, brush holder rockers, starter coils, brush holders, brush studs, and other light-weight renewal components of Reliance motors and adjustable-speed drive control equipment are packaged in moisture-proof, transparent cellophane bags. The identification ticket giving part number, name, and quantity is plainly visible; therefore packages need not be opened until parts are actually required for use.



How Much Protection Do You Want? No hard and fast rules can be made covering the particular types or specific quantities of parts that should be stocked and which have equal application in all cases. The stock of parts has to be tailored to individual needs.

In the final analysis, stocking repair parts, and determining the quantities to carry, basically depends on the answers to certain primary questions. For example: How expensive is machine outage to you? How much insurance against equipment downtime do you want; 100 per cent; 50 per cent; or 10 per cent?

The amount of protection to secure against motor failure must be decided first on a basis of past experience; then it is practical to formulate and institute a replacement parts program specifically designed and calculated to meet the maintenance requirements imposed by actual machine usage in the mill.

Atmospheric Influence. Corrosion, abrasive dust, and high room temperature are atmospheric conditions likely to increase the need for an adequate motor parts replacement program. Corrosive fumes may cause premature motor failures or excessive "wear and tear." A corrosive atmosphere normally affects standard insulated motors more than Class B or high-temperature insulated motors.

High room temperature causes motors to run hotter than normal. For example: motors rated 10 hp at 40 C rise above surrounding room temperature run hotter if the motor is operated near drying ovens and similar equipment, and the insulation is being used at a higher temperature. Insulation life on standard motors is affected by the actual temperature reached within the motor. Operated above 90 C, Class A insulation life is cut in half for every 10° increase in temperature. Assume the average life of Class A motor windings at 90 C is 20 years; this means that at 100 C the average life of windings is 10 years; at 110 C, five years, and so on.

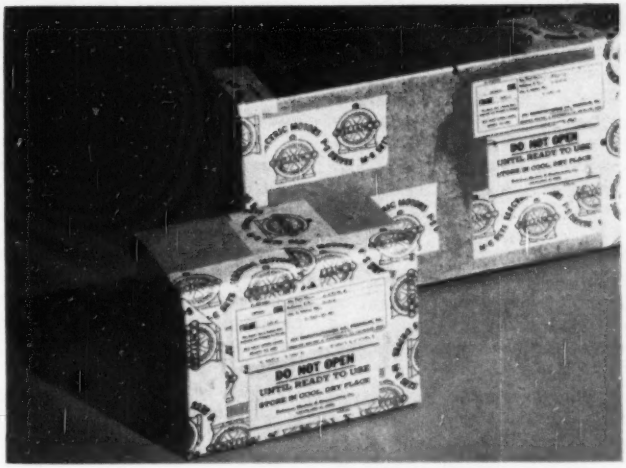
Maintenance Factors. Excluding

atmospheric conditions, there are three other conditions which are hardest on electric motors. These are as follows:

(1) Overloading results in high motor temperature. Although a motor may be rated 10 hp, it will carry considerable overload without giving any visual sign of such an overload. Nevertheless, the motor becomes hotter than it should, and this condition eventually leads to failure of stator coils and rotors in the case of a-c motors and field coils and armatures on d-c motors.

(2) The equivalent of an overload is caused by excessive starting and stopping. A single start demands a great current inrush and produces more heat than when the motor operates normally. Plug reversing and dynamic braking also produce heat.

(3) Lack of a regular maintenance schedule based on plant experience may prove costly. Because of dirt and wear factors, good maintenance is always essential. When motors operate under dirty conditions and no suitable provision is made for periodically cleaning the units, wear of moving parts increases appreciably. Dirt which has accumulated on motor frames and windings prevents proper cooling of coils, causing them to run at above normal temperatures. This in turn shortens winding life.



COILS and other motor parts subject to deterioration upon exposure or damage in handling are packaged and shipped in mailable cartons. At Reliance, each set of parts is packaged separately in individual containers which can be stocked or stored as received. Identification labels are pasted on the outside of the box. Note sticker Reliance uses to discourage opening of package immediately upon receipt by user. Packing list is fastened to outside of box at the time of final wrapping.

Replacement Parts. Windings and moving parts subject to wear require replacement more frequently than other components. Bearings on a-c motors and bearings and brushes on d-c motors are typical examples. Any parts susceptible to damage may require replacement occasionally.

Such parts as brush holders, although not considered wearing parts, must be replaced from time to time. Another illustration of non-wearing parts susceptible to damage is a cracked bracket resulting from an intraplant trucker inadvertently bumping his vehicle into a motor. Accordingly, these parts are usually stocked in mill maintenance departments.

Minimum Stock. On parts of certain types requiring frequent replacement, the dollar investment is sufficiently small to warrant maintaining a complete stock. For motors up to approximately 5 hp installed in an application where only one unit is available, a complete armature and shaft (for d-c motors) or a complete rotor and shaft assembly (for a-c motors) should be stocked for that motor.

Where four or five duplicate motors of the same manufacture are in service, one complete assortment of these elements is recomemnded for stocking. In instances where interchangeable motors are used to power critical machines, and where machine outage will create a log-jam in the

STOCK OF SPARE PARTS RECOMMENDED FOR A D-C MOTOR OR GENERATOR

- 1 set of armature coils or one complete wound armature with shaft
- 1 set of main field coils
- 1 set of intercoils
- 1 set of bearings
- 3 sets of brushes

Supplementary Considerations Before Stocking Spare Parts

1. Relative importance of individual machines or groups of related units, from total usage and stoppage standpoints, to overall plant production.
2. Whether the machines are special-purpose equipment used in processing.
3. Initial cost of equipment and investment required for stocking replacement parts.
4. Stocks maintained and delivery service provided by suppliers.
5. Storage space available for spare parts at point of use.

production flow if not quickly restored to service, stocking complete units for instant replacement is worthwhile.

Where larger motors (above 5 hp) are used, the investment in renewal spares mounts up and becomes a substantial expense item in the overall maintenance budget. The type and number of parts to stock is dependent upon the amount of insurance desired against machine outage. This is a matter of weighing the cost of parts against the time and money losses involved by equipment breakdowns.

Downtime is usually restricted to a minimum when a complete motor is instantly available for replacement the moment trouble occurs. This relieves the pressure on the repair department to make a temporary repair and enables the shop to take more time to repair the motor removed and do the job thoroughly.

Cyclical Maintenance. In mills where a complete stock of renewal parts is always available, rotational replacement by virtue of a continuous maintenance cycle frequently becomes practical. Motors can be removed at regular intervals, in groups of five at a time, and immediately replaced by cleaned and reconditioned units. A cyclical unit replacement program assures a reserve stock of five motors fit for service at all times.

Such a set-up may not be practical in some mills because of the limited types or number of motors in use. The next best arrangement is to have available the proper replacement parts when needed.

Many mill maintenance departments are often called upon to exercise considerable ingenuity to keep equipment running for continuity of production. When a motor that operates at one speed is replaced with another unit operating at a different speed, the latter must be adapted to the speed requirements of the machine by effecting a suitable change in pulley ratios.

Another value of replacement stocking can be realized on d-c motors, where speed can be varied readily through the use of suitable control equipment. On these motors speeds can be readily altered without changing pulley ratios. Of course, replacement motors must produce the horsepower required by the machine.

Protecting Parts for Storage. Safeguarding motor parts against corrosive deterioration in storage on the user's premises calls for protective packaging by the manufacturer. However, this purpose is often defeated in receiving departments where packages are torn open upon receipt to check the packing list.

Small parts such as clamps, brush holders, frame-mounting units and bolts, heaters, connectors, and coils should be packaged in moisture-proof transparent cellophane bags. Each parts package should contain a ticket, easily visible, giving part number, name and quantity, so that the package need not be ripped open before use. The packing list should be placed inside the mailable cartons in which the packaged parts are shipped.

Large parts not suitable for moisture-proof packaging should be coated with a rust-preventive solution, wrapped with wax-impregnated waterproof paper, then tape-sealed securely to protect them against corrosion in storage or shipment. For handling and storing parts received from manufacturers who do not ship their products in moisture-proof packages, it is good practice to have facilities available at the mill to wrap them in this manner upon receipt. If parts with machined finishes are received which have not been suitably "rustproofed," they should be dip-coated with a quick-drying, non-oxidizing solution prior to stocking.

In any renewal motor parts stocking plan, proper parts records play an important role. Such records should show: supplier's name and address; identification of parts by name and name plate data; location in stock; number of machines to which part is applicable; usage; price data to take advantage of quantity discounts where applicable; and minimum stock level to serve as a re-order signal.

Nomograph→

A FAMILIAR analytical procedure in textile laboratories is that for determining the amount of size in yarn or fabric. Several methods for making the analysis are employed, but all follow the same general line of attack.

The sample is weighed as received and then dried to constant or bone-dry weight. The sizing material is extracted and the extracted or desized sample again dried to constant weight. The size content expressed as a percentage of the original weight is simply:

$$\%\ \text{Size as received} = \frac{\text{(Loss in weight due to extraction)}}{\text{Weight of sample as received}} \times 100$$

Or, on a bone-dry basis:

$$\%\ \text{Size on bone-dry basis} = \frac{\text{(Loss in weight due to extraction)}}{\text{Bone-dry weight of sample}} \times 100$$

Oftentimes it is necessary to correct the bone-dry basis size content for a calculated or assumed moisture content or regain. This corrected or "as-is" size content is sometimes of greater value to the men in the mill than that determined on a bone-dry basis. The calculations involved are as follows:

$$\%\ \text{Size corrected for a given moisture content} = \frac{\text{(\% Size, bone-dry basis)} \times (100 - \%\ \text{Moisture})}{100}$$

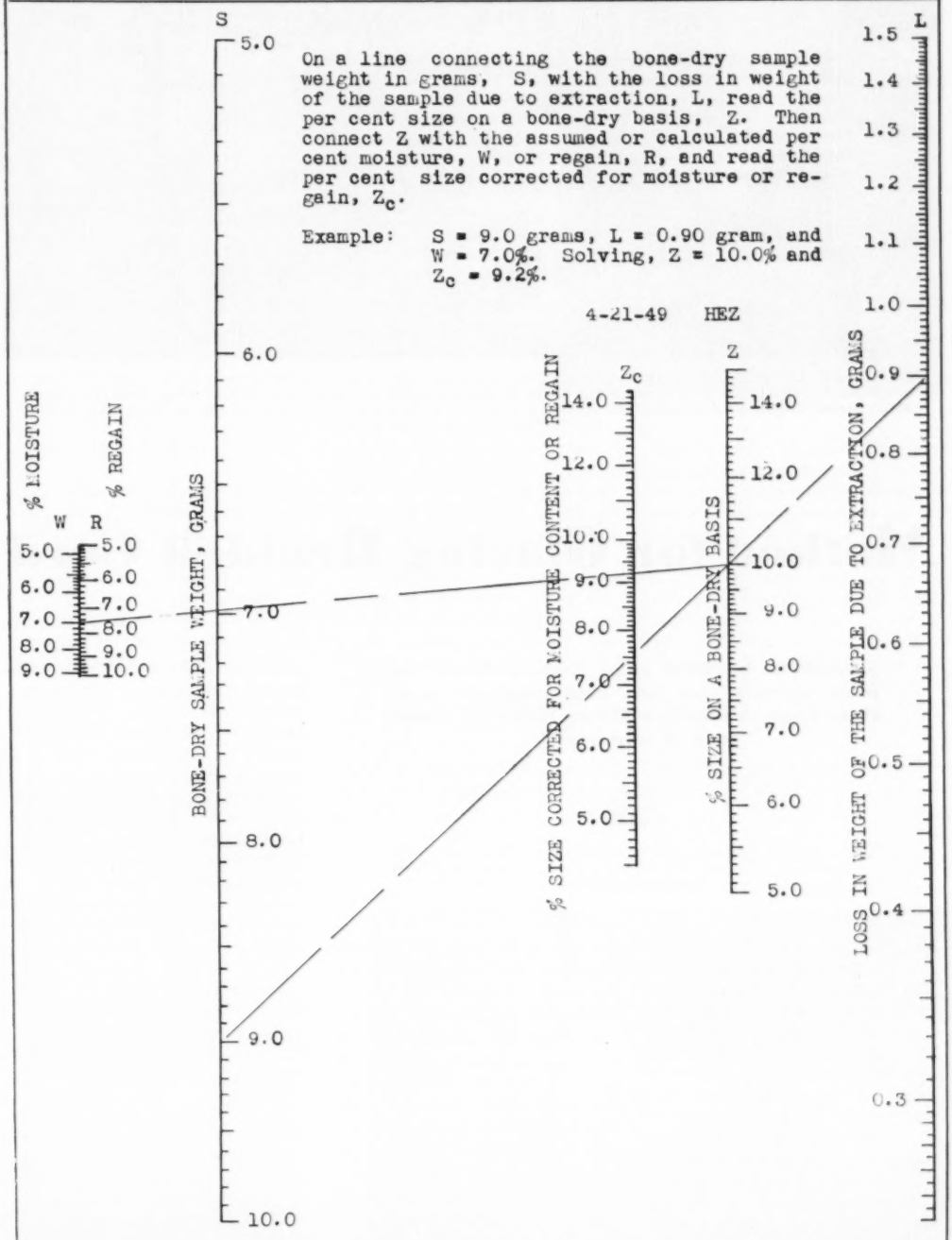
$$\%\ \text{Size corrected for a given regain} = \frac{\text{(\% Size, bone-dry basis)}}{(100 + \%\ \text{regain})} \times 100$$

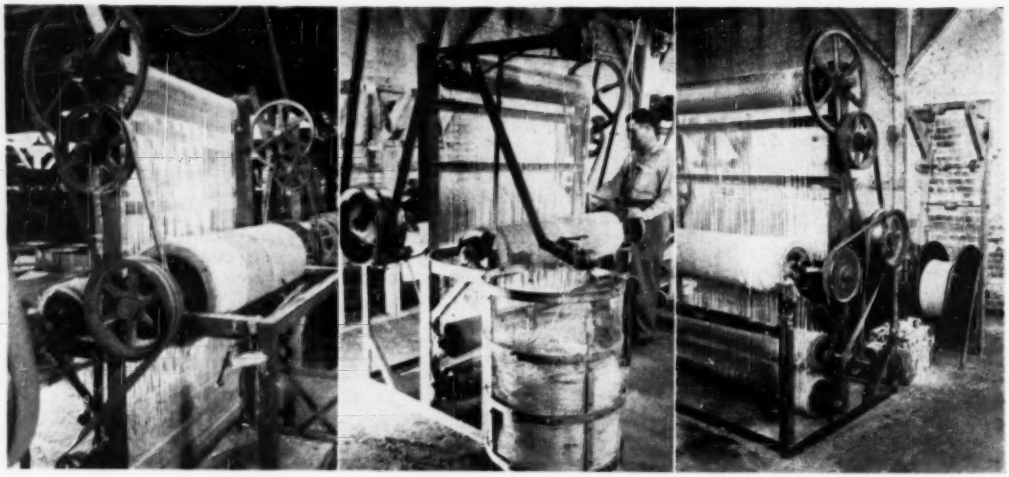
An alignment chart has been constructed to facilitate a more rapid solution of these equations.

The nomograph is not intended to replace standard methods of calculating analysis results, but it can serve as a time-saving supplement and as a quick, easy way of detecting errors in slide-rule or calculating machine manipulation. It is accurate to the first decimal place, and the second place can be estimated with reasonable accuracy.

Authors: H. Evan Zeiger and H. M. Waddle, Research Division, West Point Manufacturing Co., Shawmut, Alabama.

SIZE ANALYSIS CALCULATIONS


On a line connecting the bone-dry sample weight in grams, S, with the loss in weight of the sample due to extraction, L, read the per cent size on a bone-dry basis, Z. Then connect Z with the assumed or calculated per cent moisture, W, or regain, R, and read the per cent size corrected for moisture or regain, Z_c.
Example: S = 9.0 grams, L = 0.90 gram, and W = 7.0%. Solving, Z = 10.0% and Z_c = 9.2%.
4-21-49 HEZ
S
L
Zc
Z
W
R
% MOISTURE
% REGAIN
BONE-DRY SAMPLE WEIGHT, GRAMS
% SIZE CORRECTED FOR MOISTURE CONTENT OR REGAIN
% SIZE ON A BONE-DRY BASIS
LOSS IN WEIGHT OF THE SAMPLE DUE TO EXTRACTION, GRAMS



LARGE POLISHING ROLLS covered with cocoa fiber rope may be seen in this closeup (left) of the drive arrangement. Center, takeup rolls are driven from the top guide roll and feed the cord into a well ventilated wire mesh basket. Right, creel arrangement feeding size box. The yarn makes 55 passes on the polishing rolls before the glazing operation is complete.

Method for Glazing Braided Cord

Successful braided cord manufacturer applies special size mix and employs cocoa fiber rope to obtain a glossy finish on glazed cord of fine quality.

EXCLUSIVE

Staff Prepared

AT Forsyth, Ga., the Georgia Twine and Cordage Company is engaged in several unique practices that aid in the production of braided cord with a glazed finish of desirable qualities. The smooth, bright, hard, flexible glaze exhibits qualities and appearance that are most satisfactory for customer acceptance. This company is fast getting a reputation for braided products with a serviceable finish and pleasing appearance. This plant makes small cord of high quality and does not glaze to cover any undesirable appearance of the yarn. Only quality yarns are used to make cord, and the finish is applied to improve appearance and resistance to wear.

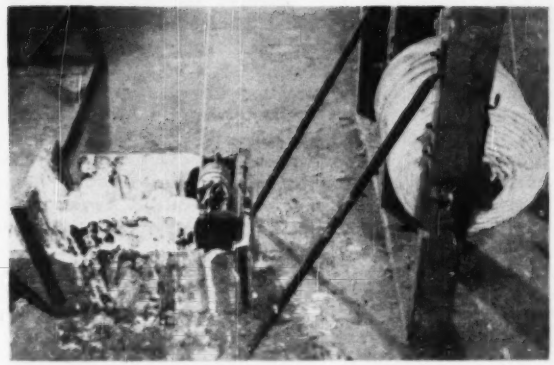
The art of glazing includes many methods for performing the operation; however the improvised machinery and techniques employed at Georgia Twine and Cordage Company produce good results at relatively small costs.

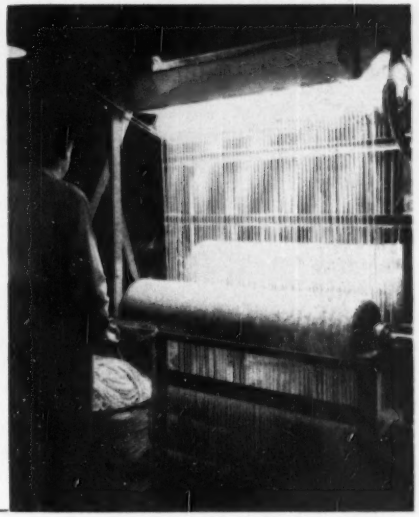
Many experiments were performed at this plant before the process was perfected satisfactorily. Many size formulas and polishing media were tried in different combinations before the correct combination was found. Machinery for the job was "tailor made" in the plant shop, and many accepted practices in glazing were discarded in the new setup. Both white and colored braided goods are glazed here.

The most important factors in obtaining a good glazed finish on braided cords are the size formula and the polishing medium, according to practices at this plant.

Preliminaries. Cord is taken from each braiding machine and placed in cans which measure 18" in diameter by 48" deep. These cans hold about 3000 yds of No. 4½ cord.

The cans are taken to winders where the cord is wound onto large tubes which hold 3000 yds each. After winding, the tubes are taken to the glazing machines. In this plant there are seven cord glazing machines in addition to other machines which are used to





SIZE BOX contains five rolls (above) and a slotted baffle to strip excess size from the braided cord which is fed from a roll into the size box. Right, glazer equipped with 27 infra-red drying lamps of 250 watts each. The lamps are wired so that one, two, or three rows of lamps may be operated on light, medium, or heavy cord drying.

glaze various braided products.

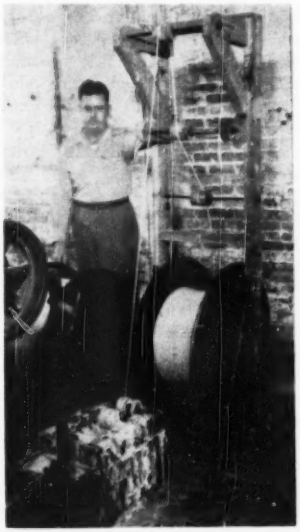
Glazing Machines. Polishing rolls on the glazing machines are covered with $\frac{3}{8}$" dia cocoa fiber rope which is tacked onto a wood surface. The polishing rolls are 18", 10", and 6" in diameter respectively, the difference in size being of no consequence. All rolls have approximately the same surface speed which is controlled by the gear arrangement. The surface speed was set by trying different speeds to see which would give the best results. Roll speeds are "medium."

The machines are driven from a 15 hp electric motor through a line shaft which passes over each of the seven glazers, and each machine glazes 50 yds of cord per minute.

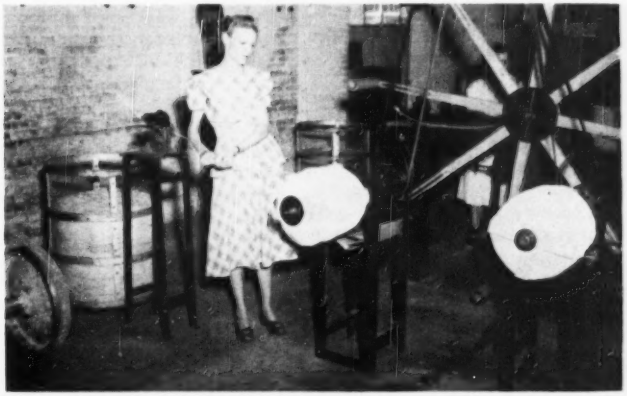
One of the glazers is equipped with 27 infra-red drying lamps of 250 watts each. The lamps are wired so that one, two, or three rows of lamps may be operated on light, medium, or heavy cord drying. On small cord (Nos. 1½ to No. 5) no supplementary drying is needed because the cord is dry when the polishing operation is completed.

The size box has five small grooved guide rollers and holds approximately three gallons of size. The box rests on the floor between the polishing rolls and the creel. Two of the guide rollers serve as immersion rollers in giving the cord two "dips" into the size mix. The cord goes over the first roller, down under the first immersion roller, out of the size

THREADING arrangement from a reel of cord through guides into the size box.



WINDING AND INSPECTING are combined into one operation. This is an economical measure in that the cord has to be examined for defects, and one winding operation is eliminated.



and over the third roller, back into the size and under the second immersion roller, and finally out of the size and over the fifth roller which helps guide the cord through a slotted baffle plate which strips off the excess size before the cord enters the polishing rolls.

In starting the operation, a tube of cord is placed in a single creel behind the glazer. Cord leaves the tube, passes over a pulley roller, and then it travels downward to the small size box located at floor level on the left side of the glazer.

In polishing, the cord makes a total of 55 passes against the polishing rolls. There are three polishing rolls on each machine, and a guide roller with grooves to guide the strand is mounted on idler bearings at the bottom of the machine. The guide roll keeps the strand in correct alignment as it enters and passes through the polishing medium. A grooved roll on top of the machine keeps the strand in alignment at that point and also serves to drive the bottom grooved roll.

Glazed cord is delivered from the machine into a wire mesh basket. The mesh construction of the basket allows air to circulate through the braid to assure good drying.

Sash cord, Venetian blind cord, light pull-cords, clothes lines, and drapery traverse-cords are among those made in this plant. Mason lines, twisted cotton cords, and glazed shade cord are also made here.

Size Formula. The size mix is thick and contains corn starch, potato starch, dextrine, locust bean gum, bone glue, water, and a preservative to prevent mildew and to keep the size from souring. The exact proportion of these ingredients is considered most important; however the exact formula is not available.

Size is mixed in a 150-gallon size cooking kettle. The mix does not have to be kept warm and will keep when stored without heat. There are no problems in handling size at this plant. After cooking, the size has a consistency similar to jelly and stays that way until it is used.

Polishing Rolls. About once a month it is necessary to renew the cocoa fiber rope on the polishing rolls because the abrading surface wears off, and size deposits on the surface of the rope. The renewal is based on 80 hours of operation per week.

Humidity is kept as low as possible. The polishing rope must be kept dry as well as the braided goods, and the glazing operation is affected by excessive humidity in that the size does not dry properly on the cord, making it impossible to obtain a good glazed finish. Although this plant does not have mechanical humidity control or air conditioning, during damp or rainy weather the temperature is increased to counteract the effects of additional moisture. It is important to keep the cord dry and free from mildew in all operations.

Winding and Inspecting Combined. Glazed cord is taken from the machines to the winding department where winding and inspecting are combined in one operation. Operatives wind the cord on reels and check for defects as well as correct yardage on each reel. Poorly glazed cord, knots, and defects caused by braiding machine breakdowns are not permitted in first quality goods.

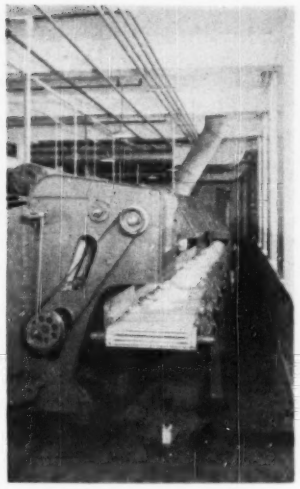
One or two knots or small defects are allowed per 1000 yds of cord, but in controlling quality to high standards, defects are restricted to a minimum. Each reel of finished braided goods holds 1000 yds, and out of two hundred 1000-yd reels, approximately one 500-yd roll of seconds may be made. This is a good percentage of first grade goods produced, according to management at this mill.

Knitters' Programs Remain "Fluid"

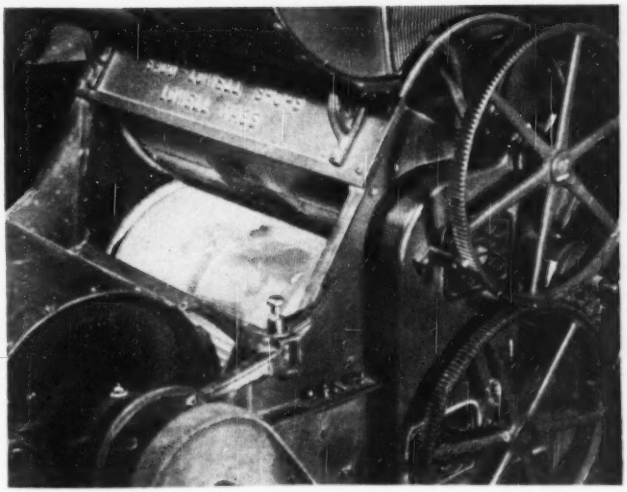
The big steel strike of last fall, followed early this year by a big coal strike, which was followed by serious labor tie-ups in the motor and electrical manufacturing industries, are stated by knitwear authorities to have so far thrown our production system out of balance that some of the holdover results now serve to retard this country's adjustment to the new wartime economy. It is alleged that selfish strikes by the leaders of large groups of workers many months ago, are presently to blame, in some part, for the difficulties that lately have been experienced in other fields, in which employers, who had no labor stoppages, nevertheless find their position compromised by labor troubles that happened months ago and in other lines.

As to knitwear producers, it is stated that the strikes in the steel, coal, automobile, electrical and other industries resulted almost at once in lessening the demand for non-durable merchandise in communities whose income suffered from these strikes. This served as a damper on the retailing and wholesaling interests serving these hundreds of places. Accordingly, inventories were "starved" by the merchants located in "struck" towns and cities, and the fact of this also influenced the inventory policies of large-scale nation-wide retail distributors, such as the mail order houses, the merchandising chains, etc., including many of the big-city department stores.

This compelled knitwear manufacturers to "trim sail" early last spring, and likewise their suppliers of yarns, thread, and all other factory staples. The emphasis then was being placed on lower prices, and to get this appeal for a sales advantage, many producers concentrated their orders into relatively low-cost facilities. In turn, this unbalanced the production of these sources, as to various types of commodities and end-goods, and despite utmost efforts since mid-year to meet new conditions, they have not yet been able to restore normal balance in their operations.



PROPER BLENDING is as important in processing waste and part waste stocks as it is in the manufacture of quality yarns.



MORE FREQUENT CLEANING of machinery is essential when processing waste. Picker screens must be picked more often. Mote boxes and other waste receptacles must be thoroughly cleaned frequently. Lint must be removed from gears.

Tips on Processing Cotton Waste

THE DEMAND for yarns and fabrics made from waste and part waste stocks is increasing. Many mills are converting at least a portion of their machinery to the production of yarns from cotton waste. Presented here are several suggestions for modifying conventional cotton card room machinery for processing waste materials.

EXCLUSIVE

By HENRY PAUL

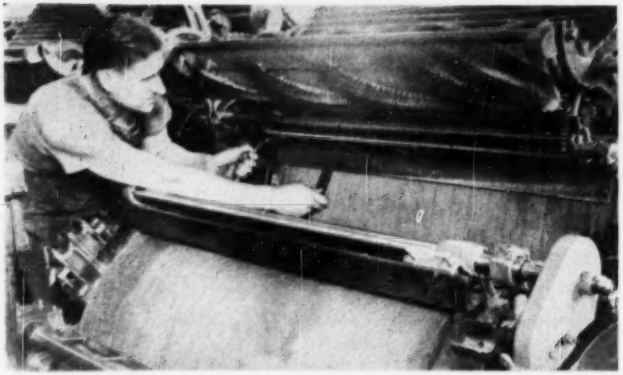
IN VIEW of present market conditions, and with high priced cotton here to stay, many mills are finding a greater demand for yarns made from waste and part waste stocks. If properly set up and handled, waste mixes can be successfully processed on present cotton machinery, but new techniques must be evolved and machinery layouts modified to take care of the different processing characteristics of waste stock.

There are many types of waste mixes that can be made. Two of the more popular ones are a 50-50 mix of low grade cotton and strips and a straight 100% strip mix. Both of these mixes can be modified by adding other types of waste, such as comber noils or clean card room sweeps, and still be run successfully.

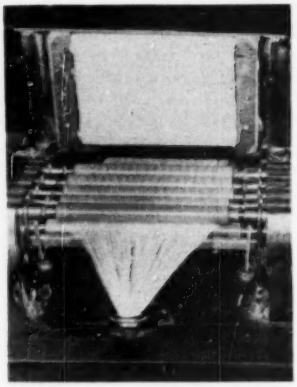
Presented here are several suggestions for manufacturing yarns from waste and part waste stock on cotton type machinery:

Opening. Bales should be opened strictly by weight. If a 50-50 mix is to be processed, the weight of strips and low grade cotton should not vary over a few pounds in the overall mix. Variations in the stock will show up uneven and if dyed will cause streaks. Also when feeding the stock into opener hoppers, it is advisable to feed strips into certain hoppers and cotton into other hoppers. If necessary to give even feed, hopper speeds should be adjusted to deliver the same amount of each type of stock to the feed table in a predetermined period of time. Mixing the two stocks in the same hopper tends to produce an uneven feed because the lighter of the two stocks will feed out before the heavier stock.

Picking. Hoppers at back of



CARD SETTINGS should be widened. Especially is this applicable to the flats and doffer. Tension between doffer and calender rolls should be reduced. Cleaning and stripping intervals should be shortened when waste is run on the cards.



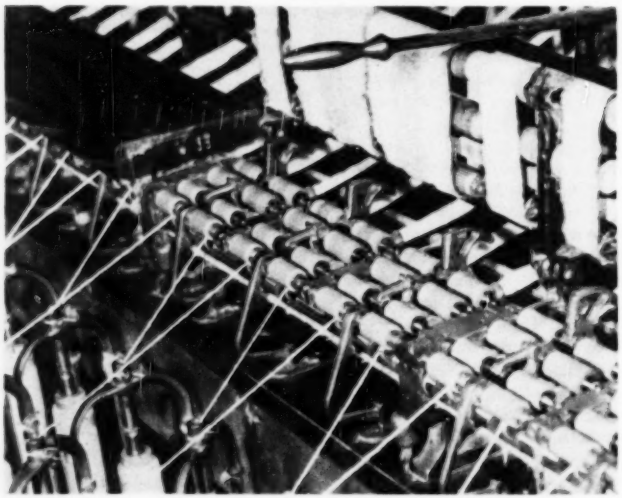
DRAWING FRAME SPEEDS should be reduced. Roller settings should be closer. Tension should be decreased somewhat.

pickers should be opened as far as possible in order to produce a heavy feed; waste stocks do not feed as heavily as good cotton. Beater speeds and grid bar settings should be modified to allow for less removal of trash. It is necessary to run a higher humidity in opener and picker rooms not only to make stock run better, but also to forestall the possibility of fire. This can be done because removal of waste is not of primary concern in processing waste stocks. Operators should be taught that mote boxes and other waste receptacles must be cleaned out more often and kept clean. The excessive amount of trash in waste stock also makes it necessary to check the condition of beaters and grid bars more often and remove any dull beaters or grid bars before they cause trouble. Picker operators must do more cleaning than they do when running white cotton; screens should be picked more often, and calender rolls cleaned at shorter intervals.

Carding. In processing waste mixes, all settings on cards can be opened wider, especially flats and doffer settings. If settings are too wide, the quality and even running of the stock will be affected. Oil should be applied to the stock in the opener room to cut down dust and fly at the card room. If possible, continuous strippers should be put on all cards running waste. Continuous strippers not only save labor but also provide a much higher rate of production. Cards processing waste stock must be stripped about twice as often as cards running regular stock.

More humidity should be maintained for cards running waste, and care should be taken that the tension between the doffer and the front calender roll is not too great; otherwise the web will be unduly stretched, thereby producing bad sliver. It is a good practice to reduce tension at this point when changing from white stock to waste stock. Flats should be cleaned more often in processing waste stock. Cylinders and doffers should be stripped thoroughly by hand at least once every 24 hours as the excessive amount of motes and trash in the

MORE TWIST IS NEEDED in making roving from waste stock. Tension should be reduced. Clearers should be picked often and roller beams wiped frequently. To prevent ends from becoming tangled when too slack, it is suggested that taper of bobbins be increased slightly.



waste stock tends to become packed on the cylinder and doffer, and the continuous stripper cannot remove it.

It is advisable to put heavier clothing on the cylinder and doffer; both foundation and wire if waste stock is to be run continuously on the cards. It is a good idea to designate certain cards for waste and set them up to run waste stock at all times if more than one type of stock is being run in the mill. Proper control of humidity and temperature in the card room, with as little variation as possible, makes a great difference in the successful handling of waste sliver. It is good practice to make heavy card sliver from the waste mixture because a heavy sliver is usually more even than a light sliver.

Drawing. Speeds on drawing frames should be about 10% below comparable speeds for white stock because fiber affinity in waste stock is much less than in white stock. Roller settings, as a general rule, should be closer due to the absence of long staple in the stock. Tension should be decreased approximately 20% in that fiber affinity is much less and has a tendency to increase ends down.

Standard diameter trumpets should be used and set up higher than for better grades of stock. Rollers must be cleaned more often, and both top and bottom clearers picked at least once after every doff. Waste stock makes much more clearer waste and if not removed from clearer frequently will cause ends down and bad drawing. Humidity should be higher around drawing for waste stock than for white cotton.

Fly Frames. Roving made from waste is usually processed at a lower speed than white stock because it is necessary to insert more twist in the roving to hold it together and wind it properly. Twist for waste should be at least 20% greater than on white stock. Unless additional twist is inserted, the efficiency of the frames will be reduced too much by ends down, lap ups, etc. Tension should be reduced until the ends tend to flop slightly when running; if more tension is used the roving will be stretched and will have thick and thin places in it.

Clearers should be picked often and roller beams wiped frequently. The increased twist will cause the yarn to be more dense and will overcome the tendency of waste yarns to fluff. The lay gears should be the same as those used on white stock.

It is a good idea to put a little more taper on bobbins of waste roving to prevent the ends from becoming tangled if tension gets too slack. It is necessary to have a higher humidity around fly frames to forestall lapping up because waste yarns seem to cause more static electricity. Lifter rolls and guides should be in good condition and checked frequently to prevent stretched work in drawing. Cork or synthetic top rolls are satisfactory for running waste.

Waste yarns can be satisfactorily processed in the card room on cotton machinery if the machinery is properly adjusted and maintained.

Scourable Sheep Branding Fluid

After several years of research work, a branding fluid for sheep has been developed that is completely removed from wool by scouring (See article "The Value of Scourable Sheep Branding Fluids in Wool Manufacturing," September issue TEXTILE INDUSTRIES.)

The branding fluid combines two necessary characteristics: (1) it remains highly legible after months of exposure to rigorous climatic conditions, and (2) it can be completely scoured from wool by the usual process.

After unsatisfactory trials with many different products, George C. LeCompte, in charge of this research project for USDA, turned to lanolin (wool grease) as the base for the fluid. Lanolin has the required body for the paint, and adheres well to the wool during exposure. The formula now used is lanolin 100 parts by weight, carbon tetrachloride 25 parts by volume, and pigment 3 parts by weight.

Two years ago, the lanolin formula paint was applied to about 3500 sheep at the U. S. Sheep Experiment Station and Western Sheep Breeding Laboratory, at Dubois, Idaho. Last summer when these sheep were sheared, the brands were still clearly legible after one year's exposure. The paint wool was sorted from the fleeces and forwarded to a commercial company for scouring and processing into cloth. The cloth produced was completely free of paint.

Effort is being made to improve the formula with a view to finding a more practical method of keeping the paint in the most desirable consistency at low temperatures. However, field experiments have demonstrated the durability of the scourable brands and both laboratory and commercial scouring have shown the brands to be scourable. The product is considered a success.

Widespread use of this scourable branding fluid should solve one of the troublesome problems of the wool industry. The need for identifying sheep with a durable brand lasting for several months is paramount and wool growers have used ordinary paint, tar, linseed oil, or old motor oil mixed with carbon black or ferric oxide. Although successful from a branding standpoint, these materials have presented serious difficulties in the processing end of the wool industry. Brands that are not scourable require hand work in removing that part of the wool from the remainder of the fleece. If this paint wool is not removed, faulty fabrics may be produced.

A copy of the detailed report on this research entitled "Development of Scourable Sheep-Branding Fluids," may be obtained from the Information Branch, Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Call Overhead Cleaning Most Effective . . .

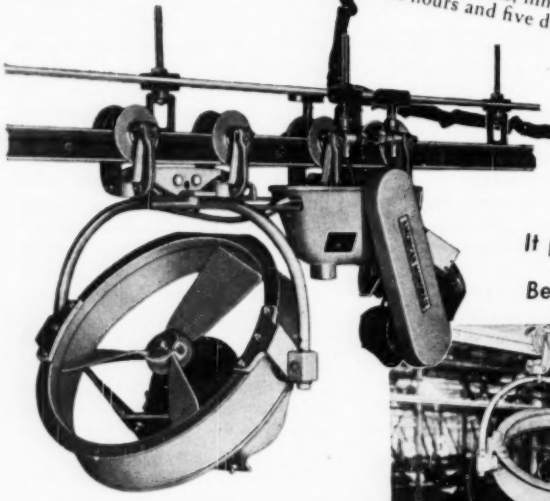
At a meeting in Atlanta questions on carding and spinning were discussed by mill men from 39 Georgia mills. One of the questions asked was:

Question: Please give any information you have in regard to automatic overhead cleaning in the card room, stating advantages and disadvantages as compared with non-automatic cleaning. (b) If you do not have automatic overhead cleaning in the card room, please state method and schedule, giving type of stock being run.

Replies by those mills which have automatic overhead cleaners show they are definitely in favor of such a method. Mill H has found an overhead cleaner on a track very helpful. The cleaner changes its angle each round trip which requires about 20 minutes. No other cleaning is done, the mill stated. Previously this mill which runs mostly SGO cotton, was blowing down every shift.

Briefly, the advantages of automatic overhead cleaners specified by Mill HH are less slugs, cleaner overhead, elimination of former cost of manual overhead cleaning. Another company, Mill KK, stated it uses MONORAIL overhead cleaners and has found them to be most effective. The system has given a very small amount of trouble and saved greatly on labor, according to the mill's report.

In the group which reported they do not have automatic systems, nine blow down once a week, eight every 24 hours and five do this work every eight hours.



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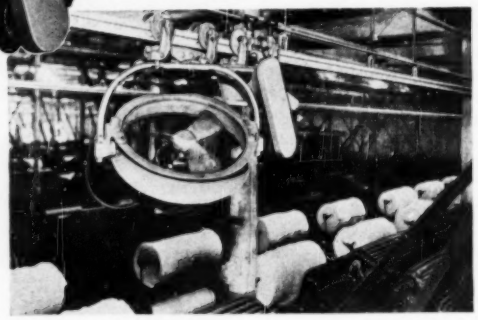

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Adjustable Yarn Cone Holder

for Circular Knitters

Cone holder for knitting machines assures free delivery of yarn.

EXCLUSIVE

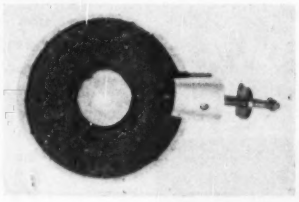
PROPER delivery of yarn from cone to needles is an important factor in knitting on any type of knitting machine. Wool, cotton, or mercerized cones of yarn do not present any difficult problems insofar as yarn delivery is concerned. However, the picture changes considerably when rayon, nylon, or silk yarns are used. Today's rayon cones make a fairly heavy package in any denier from 75 through 300.

The general practice on circular hosiery knitting machines is to place the cones on a holder made of a piece of cardboard covered with a piece of felt which has a hole cut in the center into which the protruding part of the cone fits, thus preventing the yarn from getting under the outer edges of the cone during knitting operations.

Pads of soft fluffy cotton have also been used for the forementioned purpose. Both ideas are good, but they do not give the required results for two reasons: first, they do not eliminate the pressure against the pads caused by the weight of the package; second, they do not allow for the difference in length of the protruding part of the cone below the surface of the yarn.

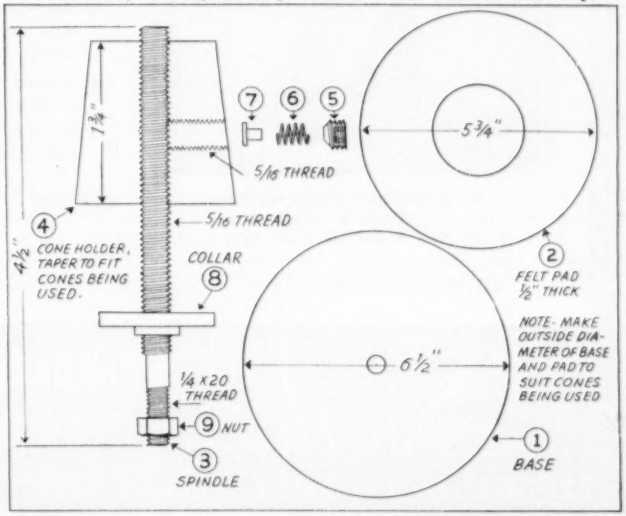
After considerable experimenting, an adjustable cone holder was made to take care of various kinds of yarn in fine or coarse counts. The adjustable cone holder, shown in the accompanying illustrations, is not perfect, but it will eliminate many difficulties. Simply place a cone of yarn on the holder; turn the cone up or down until the under side barely rests against the felt pad; free delivery of yarn is assured until the yarn supply on the cone is exhausted.

It can readily be seen that the weight of the cone has no bearing on the delivery of yarn whatsoever. Rayon, nylon, and silk yarns have a tendency to fall down around the base of the cone when knitting stops abruptly. These yarns get under the outer edge of the cone, if there is any space between the bottom of the cone and the pad under it. The adjustable feature of the device prevents this trouble, and also prevents press-offs, seconds, and waste caused by poor delivery of yarn.



The complete device is not difficult to make and consists of nine pieces as follows (see illustration): (1) metal base; (2) felt pads; (3) threaded spindle; (4) metal or plastic cone holder; (5) Allen set screw; (6) spring; (7) brass plug; (8) threaded collar; (9) nut. Nos. (5), (6), and (7) form a brake or friction to keep the cone from turning; numbers (8) and (9) hold the base on the yarn rack.

Detailed sketch of adjustable yarn cone holder made in mill shop.



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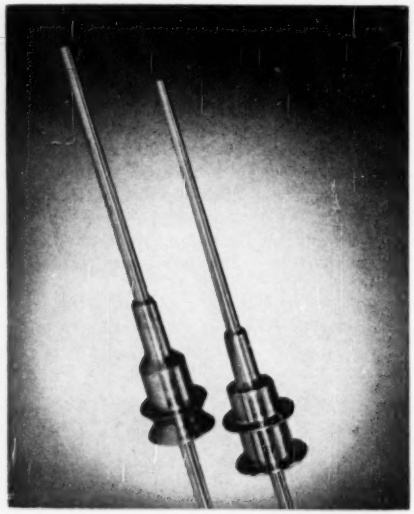

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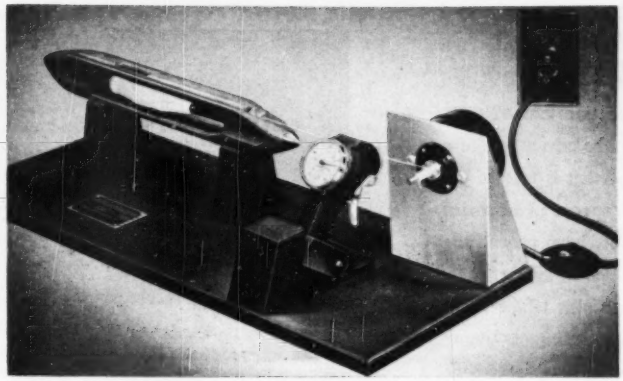
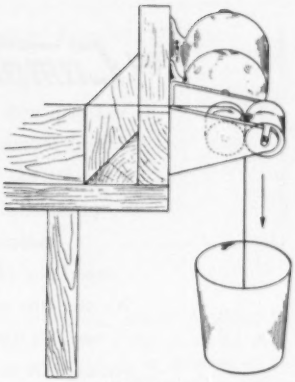


SHUTTLE TESTER for determining the tension on filling. Yarn from quill is passed through the tension meter and is wound onto a spindle which revolves at constant speed.



TESTER WITHOUT SPINDLE. Yarn may be passed through rolls and discarded into container.

Measuring Shuttle Tension

By ERWIN J. SAXL
Saxl Instrument Company
Harvard, Massachusetts

IN MANUFACTURING fabrics, frequent defects which occur are filling bars, variation in width of the finished fabric and uneven selvages. These defects have received particular attention recently because the trend in present styling is to use lighter yarns, such as fine nylons, which are more sensitive to stretch and discoloration upon finishing. Particularly when dealing with synthetic yarns that have less than 35 turns of twist, the stretch-sensitive conditions exist and produce off-colors in finishing. Another instance where fillingwise off-colors and variation in finished width is of considerable importance is in the field of elastic fabrics, such as girdles and surgical goods in which rubber covered yarns are used.

Why Shuttle Tension is Important. The tension on the yarn as it leaves the shuttle is especially important in avoiding the forementioned imperfections. For instance, elastic yarn pulled out to greater stretch from the shuttle will cause the fabric to shrink to a narrower finished width that may not always be acceptable to the customer. The contractile properties of elastic cloth are strongly influenced by shuttle tension. The measurement and control of shuttle tension, therefore, is of great practical as well as scientific importance.

Aside from variations in finished width caused by uneven contraction of the filling yarn, the fabric structure and dye absorptive properties are affected by variations of shuttle tension. Defects occur in that yarn that has been stretched will dye a lighter shade. A shuttle that has more tension than the standard will cause a filling bar. Too much tension may cause warpwise discolorations in the fabrics that may be anywhere from the width of a hand to several feet, depending upon the size of quill package, count of the yarn, and yards of filling on the quill. (This latter characteristic includes such factors as density of the sley, fuzziness of the yarn, and other attributes that influence how densely the filling is packed into the weave.)

Aside from color defects, excessive tension also causes variations in light reflecting properties. The ability of the fabric to absorb and reflect selectively certain parts of the spectrum are changed by an excessive elongation of the yarn and show up as variations in the glossiness of individual parts of the fabric; such defects are commonly called shiners. This glossiness is produced by differences in the alignments of the yarn and its component parts.*

From the viewpoint of the practical mill man, the avoidance of shiners is just as important as the avoidance of filling bars, lack of uniform width, wavy selvages, and similar related defects that cause

*From the viewpoint of textile physics and chemistry, special reference is made here to the fact that the shiners show up extra strong under polarized light. An analysis of the light reflecting properties of textile materials with polarizing equipment should be encouraged by organizations devoted to textile research. A very basic approach to textile materials and their variation is possible by observing yarns and fabrics under different stresses at oblique angles of illumination and observation.

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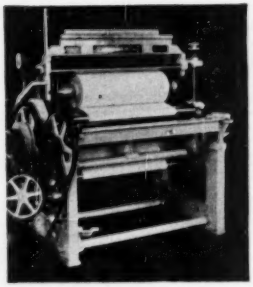

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Irregular and wrinkled selvages frequently go together with uneven finished width. In this respect, the shuttle tension alone is not necessarily significant, but when excessive shuttle tension together with uneven warp tension on the selvages occurs, then the edges of the fabric have a tendency to curl and pucker.

Also, beyond a certain stretch the yarn becomes permanently elongated and produces shiners and variation in the contracting properties of the cloth.

There are differences in the hand and surface structure of fabrics that are woven with filling of varying tension—crepe fabrics, for instance, will produce a different pebble. Yarn that has been released with little shuttle tension and laid in the fabric practically without stretch can be bent more easily, thus giving a fuller effect and a softer hand. Filling under considerable tension has a tendency to contract the cloth, packing same harder, which results in a harsher fabric of greater stiffness, everything else being equal. Proper tension also reduces filling breaks.

Thus, the measurement and maintenance of correct shuttle tension is of primary importance, not only in the weaveroom, but also in dyeing, finishing, and merchandising.

Measuring Shuttle Tension. To correct any effect and to establish limits of tolerance for proper adjustment, it is axiomatic that this effect has to be measured first. Based upon such knowledge, the curative measures can be taken that will remedy a situation and permit the establishment of such routine as to avoid a recurrence of faults. To handle this situation properly, the guesswork has to be taken out from the setting of the shuttle. Readings by instruments are helpful.

Realizing that test work has to be handled under the practical conditions of the throwing and weaving mill, equipment of this nature should be of a type that it can be handled by unskilled help. Moreover, the testing procedure should be indicative of true performance conditions.

FACTORS AFFECTING TENSION IN SHUTTLES

1. Tension under which filling is wound.
2. Angle at which yarn leaves shuttle eye.
3. Lubricants and dyes.
4. Position of quill in shuttle.
5. Manner in which tension devices (furs, bristles, etc.) are used.
6. Hairiness of yarn.
7. Condition of filling quill.
8. Amount of filling on quill.

Analyzing the conditions of performance of the shuttle, we then have the relative motion of the yarn leaving the shuttle with a speed which should be at least comparable with shuttle leaving the yarn, and that should remain constant for all shuttle test performances. Moreover, this relative motion from yarn to shuttle is at a given speed equivalent to the picks per minute and width of the loom which during the actual moving cycle of the shuttle gives the feet per minute at which the yarn leaves the shuttle or vice versa.

This condition can be approximated in a test set-up by a motor, the shaft of which rotates at such speed that the yarn leaving the shuttle is wound upon said shaft (or a paper tube covering it) essentially at the speed with which it would leave the shuttle.

Machine for Testing Tension. This condition is approximated in the shuttle tester shown in the accompanying photograph. It has a synchronous electric motor which rotates at uniform speed. The yarn may be wound on a shaft at a speed essentially similar to the one at which it would leave the shuttle. Under such conditions a winding operation takes place which fundamentally duplicates the action of the yarn leaving the shuttle. Also, the speed of the yarn leaving the shuttle is the same at all times because the motor drives at the constant speed derived from its uniform rotation.

Naturally, the filling yarn is threaded through the tension meter shown in the photograph.

Certain precautions are necessary. For instance, a rigid mounting of the motor is required so that the pull of the yarn is a uniform one at all times. A shield is applied to the motor shaft so that the yarn always is deposited in front of the shield and thereby cannot enter the motor proper.

It is advisable to wind a paper around the shaft first and hold it in place with a rubber band. Instead of the paper, a cardboard tube may be slipped upon the shaft so that the yarn upon accumulation can be discarded readily.

Although a direct winding set-up is shown in the photograph so that the yarn is wound on the axle at full speed, this arrangement is not necessarily used at all times. For instance, there are narrow-fabric shuttles where the yarn leaves at right angles to the shuttle; within this shuttle there are filling bobbins that are permitted to move. The comparatively high speed with which the fly shuttle leaves the yarn is not the proper testing speed for checking the shuttle used on narrow fabric looms. Here less speed is desirable, and in such instances a gear transmission or other means of stepping down the rpm of the pulling device should be used.

Also instead of positive rewinding, as shown in the photograph, it is possible to have the yarn pass between draft rolls and to discard same directly into a bucket, as shown in the accompanying sketch. This last method reduces the speed of the rewinding operation and eliminates removing yarn from the shaft.

The shuttle is tested first with the eyelet facing the motor. Then the shuttle is turned around so that the eyelet is on the opposite side. In this manner the resistance of the tension can be measured by a method that indicates both the right-to-left as well as

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the left-to-right pick of the shuttle.

Adjusting Shuttle Tension. From one shuttle to the other there should be as reasonably a constant tension as can practically be achieved. Some shuttles contain pressure and brake-like parts in the eyelet that are adjustable with a key or screwdriver and whereby the tension can be varied. These tensions can be adjusted while the yarn is running.

Other shuttles provide pins through which singly or severally the yarn can be threaded, thereby giving the yarn more or less friction as it turns around one or several pins. Adjustments with a rubber band and with the setting of the pins are also a customary way of changing shuttle tension. The ease of handling these adjustments by simply observing how they influence the readings on the tension meter makes this test correct and also practical for unskilled operatives.

Another way of adjusting tension concerns itself with the proper design of bristles and furring mounted inside the shuttle. Not only the length of fur or bristle but also the way in which it is attached and touches the yarn is important.

The tension as the filling bobbin unwinds has to be coordinated with the center of the construction of the yarn package. Yarn leaving an almost empty filling bobbin may touch the center of the quill. This increases the tension. In packages of such type, the furring should cover the tip of the bobbin first, keeping the heel uncovered. Thereby the full bobbin would encounter the resistance of the fur, while as the bobbin empties there is less resistance from the fur in approximately the same degree as the tension is increasing, caused by the yarn touching the center of the quill.

Importance of Quilling. The tension on the quilling machine proper has a great deal to do with the tension with which the yarn leaves the shuttle. The way the tip, the center, and the bottom of the quill are covered with yarn by the filling winder markedly influences the correlation between the resistance around quill as the yarn slides over it and such added resistances as may be introduced by furring, bristles, and the like.

It is here that the superintendent can improve operations by actually checking quantatively what tension variations there are between the top and the bottom of a quill during winding.

Variation in Tension. From the adjustable shuttle eye to the variation in furring and bristles and particularly to the construction of the filling package that is used, there are a great many variations possible within which there is found a means of equalizing shuttle tension.

A quill that is wound under considerable tension is hard and will offer greater resistance due to the compression within the layers of yarn than a comparatively loosely-wound quill.

The hairiness of the filling yarn and textile oils and dyes still further influence shuttle tension.

When the yarn touches the center of the quill, tension frequently increases. On a self-threading shuttle with the eye pointing towards the tension meter, a tension of 27 grams was observed when full. The same bobbin gave 31 grams when nearly empty. Just before the yarn ran out, the tension jumped to 40 grams, thus indicating the importance of proper adjustment of the mutual relation between package, bobbin-center, and outside tensioning means such as furring and plate frictions.

Summarizing, shuttle tension is a highly involved problem. Fortunately it yields to good common sense and intelligent investigation with the aid of quantitative means of instrumentation. Thus, the measurement of shuttle tension is the forerunner of its control.

Much of Fall Buying Already Achieved

Observers in the knitwear and other fields profess to believe that the active consumer demand handled since middle of June, for general merchandise items that may later become scarce, has more or less thrown the economy out of balance for the present. Planning for the longer future has been rendered nearly impossible, it is claimed, but in some categories such planning is a necessity if there is to be a smooth flow of manufacturing materials into the mills and factories, and an adequate supply of consumer merchandise on retail counters.

Under the circumstances most manufacturers and their wholesale and retail outlets are doing the best they can. It seems inevitable that, later on, it will probably be shown they made mistakes in judgment in certain directions, but the large majority of suppliers at any level can rightfully contend that they handled their resources as best they knew how.

The knitwear middleman over the past weeks has really been in a quandry as to how far ahead he can safely sell, not only as to prices, but as to his ability to make deliveries according to his promises. This condition of doubt and indecision also affects most of the manufacturers, whose costs now are uppermost considerations, already having led them to withdraw their lines occasionally, and to be careful about pricing knitwear commitments over the longer future.

Even among the yarn interests and many others who furnish knitting mills with materials and supplies of various kinds, there has been doubt as to what they should quote and how far ahead they should obligate their production. However, from the retailers' standpoint, a very unusual volume of sales has been experienced since mid-year and it is felt by some merchandise experts of the big stores that, after all, this pre-fall buying may have eased the customary demand for seasonal goods during September and early part of October.

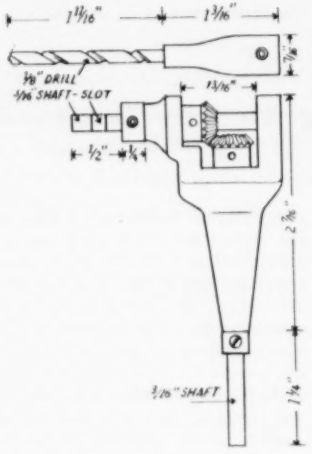
Offset Drill for Knitting Machine Fixers

A valuable addition to any circular knitting machine fixer's tool kit, the tool described in this article may be made in the mill shop.

EXCLUSIVE

By ERNEST BRIDGES

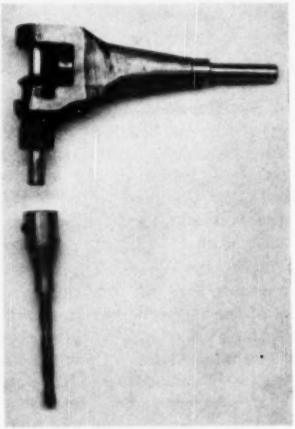
FREQUENTLY it is necessary to remove a broken screw or stud from an inaccessible place on a knitting machine. It is difficult to work in close places with ordinary tools, and oftentimes attachments must be applied where holes have to be drilled and tapped. Sometimes there is insufficient space to use an ordinary hand drill. For example, drilling a hole in the lower deck of any modern double deck machine requires expert skill and care. The entire upper deck could be removed, but in drilling one hole this operation requires too much time and labor.



An offset drilling device can be made to simplify many of the problems encountered in trying to repair, service, and fix circular knitting machines. The device is designed to drill holes in close places where a conventional type drill cannot be used. The contrivance is shown in the accompanying illustrations and can be easily made in the mill shop.

The complete assembly is made from a piece of cast iron measuring 3/4" x 1 1/2" x 2 1/2", two pieces of 1/4" shaft, two bevel gears, two bevel gear pins, and two collars with set screws. A drill adapter is made of a short piece of shafting by sweating a drill of desired size into one end of the adapter. Drill a 1/4" hole in the other end and provide a set screw so the drill adapter can be attached to the lower end of the driven shaft.

The drill attachment can be made by someone in the mill shop, and it will prove to be a valuable addition to any fixer's tool kit. It will more than pay for itself the first time it is used on a job where limited space prevents the use of an ordinary electric drill.



S. C. Claims Low Costs for Wool Goods

It is possible to produce woolen and worsted fabrics in South Carolina at a lower cost per unit than in a northern location, according to a new bulletin published by the state research, planning and development board of South Carolina. The publication, entitled "South Carolina, a Location for the Woolen and Worsted Industry," was written by James A. Morris, a native of Lawrence, Mass., who is now adjunct professor of economics at the University of South Carolina.

The bulletin states that cost advantages are not of a transient nature and their effect is just becoming apparent. As competition grows in the industry, small savings in cost will be more important.

Various factors accounting for expenses in the production of woolen and worsted fabrics are discussed in detail and facts are cited to support the conclusions. The large supply of native-born, intelligent, productive labor is called an important factor in the state's industrial development.

A Textile Utility
Product of
Wide Application

NEWLY IMPROVED!!!
now a *four star* product

Levelene*

★ wetting-out
★ preparing
★ dyeing
★ finishing

An effective Leveling agent—Penetrant—Dispersant and active Stripping Catalyzer.

New Levelene has greatly improved wetting-out properties.

Particularly well suited in minute quantities as a retardant for vat dyeing—either in the pigment pad or reduced methods—as well as for vat stripping.

Another of the A.A.P. range of superior textile auxiliaries.

For detailed information regarding your own particular requirements consult our nearest branch. A.A.P. technicians are always happy to be of service.

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*Reg. U. S. Pat. Off.

and they have a better fabric, too

"It isn't just the production of 15 or more dozen pairs in 8 hours. They are getting better stockings too with the new Reading Machines."

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision and greatly simplified control in operation . . . 30 sections . . . 51 and 60 gauge.
TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

A Pork Barrel War

THIS discussion offers a proposed method of paying for a war at the time it is being fought, and a way to offset inflationary trends in wartime. For Americans the system proposed would be a hard dose to take; but it would be something less than the "blood, sweat, and tears" offered by Churchill when he became head of the British government during the crisis in World War II.

In his letter of transmittal the author advised that the article "may be too strong medicine for you to take." It is strong medicine! And the article may be premature. But it does contain food for thought.

The editors present the article, not necessarily as an endorsement of the suggested system, but with the belief that provocative discussions such as this are desirable to emphasize needed changes in our present political trends. Letters of comment are invited.—Eds.

A WAR has two aspects. One of these is the foreign, or shooting war, grim and deadly; and the other is the domestic, or pork barrel war, which is a joyous adventure in boondoggling.

A French statesman is credited with remarking that it took three things to wage war: "Money, money, and more money." This seems to be the general attitude of practically everybody toward war—that it necessarily leads to an extravagant outpouring of money — and the delusion that wars create prosperity and help business is such a widespread superstition as to be practically ineradicable.

In contrast, Dr. Albert Einstein is reported to have remarked to a Senatorial Committee which was expressing doubt some time ago that Germany had the money to wage an extensive war, "It does not take money to wage war. It only takes men and materials and the decision to use them." This was an eminently practical and sensible remark, the truth of which was amply proved by the magnitude of the war Hitler was able to wage with or without money. This is sage advice, which will be totally lost on most of our legislators, who seem firmly convinced that the only way to persuade the homefolks to supply their fighting men is to bribe them to do it.

THE LAST WAR brought about a shocking and disgraceful distribution of money to millions of persons who did little if anything to earn it. There are few textile executives who can not remember instances of their own employees leaving jobs at around $25 a week doing work at which they were skilled, to take up war work about which they knew absolutely nothing, at $100 a week or more. Not only were the base wages grossly inflated, but the overtime racket was worked to excess by contractors anxious to make everything cost as much as possible under a cost-plus contract.

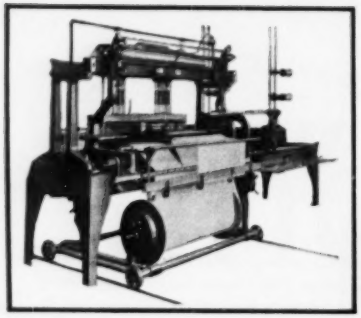
The cost-plus contract is a political joy, and an economic absurdity. Under it, you pay a man a premium for waste. You issue him a formal invitation to swindle you, and since his remuneration is determined by the amount of the waste and the extent of the swindle, it is imbecilic to expect him to be prudent and thrifty. Under the cost-plus contract, the incentive is not to see how much you can get done at how little expense, but to see how little you can get done at how much expense, and the less you produce and the more you can make it cost, the better off you are.

A classic example of the iniquity and inequity of the cost-plus system was the case of a war-time manufacturer who was screaming for 12,000 more men under his cost-plus contract, and who, upon the cancellation of the cost-plus system and the institution of a straight per unit basis of payment, suddenly found that he already had 10,000 too many people. As long as the contractor profits by padding his payroll, he will pad it, but as soon as he profits by cutting it, he will cut it, and as soon as he has to produce in order to profit, instead of waste in order to profit, his whole attitude toward his job changes.

Much of the extravagant distribution of money during the last war was due to the policies of an Administration firmly committed to the theory that inflation is good for us and breeds prosperity. Much of it was just plain stupidity.

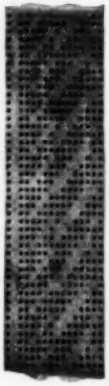
The United States entered the last war in a peculiarly favorable economic position to wage war, in that the nation had become habituated to a 40-hour work week, and by the simple expedient of freezing wages and lengthening this work week, the equivalent of about 10 million people could have been added to the labor force without costing anybody a nickel. Advantage was never taken of this favorable situation, but on the contrary, the federal law forced the payment of tremendous overtime

By THOMAS JEFFRIES



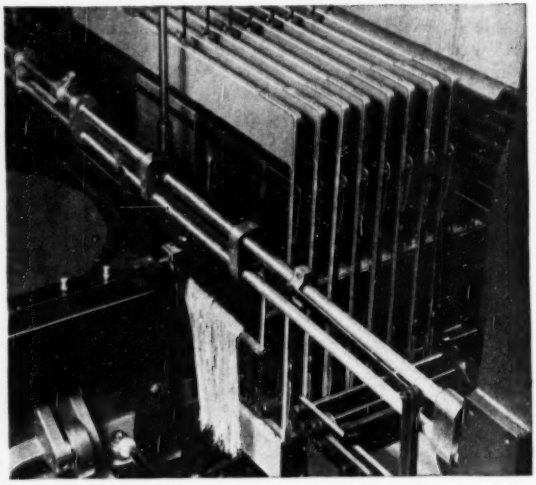
BARBER-COLMAN DRAWING-IN MACHINE

THIS MACHINE WILL DRAW-IN ANY DRAFTABLE PATTERN UP TO 26 HARNESS 6 BANKS OF DROP WIRES, AND REED



FAST! ACCURATE! SAVES TIME! SAVES MONEY!

The strips down the center are photographs of two typical punched metal pattern ribbons which control the machine by determining the elements through which each thread will be drawn. All elements are drawn in one operation.



For practical purposes, there is *no limit* to what this machine can handle. No matter how complicated the pattern, if it can be drafted, the machine will draw it—just as fast and just as accurately as any simple pattern. At the show we demonstrated a plaid that went over 500 threads before the pattern repeated. You can put one, two, or three threads through a single harness eye, if you want to. You can have the dents in the reed drawn regular (like 3-3-3-3) or irregular sequence (like 4-3-1-4-2), or any other arrangement you need. Best of all, you can get your warp ready for the loom in a *fraction* of the time it would take by hand—and repeat it just as quickly any time you like. If you want to save *time* and *money*, investigate the possibilities of this machine at the first opportunity.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

rates to hordes of persons who were never needed on the payroll in the first place.

If in the near future we go into another war, and our country is on a 40-hour week, there will be nearly 60 million persons employed. If as many as 40 million of our gainfully employed workers are on the 40-hour week, we could add the equivalent of 10 million workmen to the labor force by merely changing to a 50-hour work week.

We could not only get 10 million workmen by this simple change in working hours, but we could get them absolutely free of charge by freezing wages at the 40-hour level. There is not the slightest possible reason why a man working in the defense of his life, home, and country should not be willing to contribute something that costs him nothing, to that defense. It would not cost a workman one penny to give 10 hours a week of his time to his country's defense. In fact, a man can probably live cheaper if he works 50 hours a week than he can if he works 40, because he has less need for spending money to keep himself amused during his spare time.

There are claims that a workman can not produce proportionately more when his hours are lengthened beyond eight hours a day. The term "can not" should not be used, but "will not" might be true. A workman doesn't get tired doing what he is interested in doing. He gets tired doing what he considers drudgery. Take the same man who swears that he is exhausted after eight hours of work in the factory and put him at something that he really wants to do, and his wife can hardly tear him away from it to come to supper. Any workman who becomes enthusiastic over his contribution to the war effort will never suffer putting in 10 extra hours a week, and more if needed.

It is not money, but men and materials, and the enthusiasm of the men in using the materials that count in the final analysis.

It has been repeatedly said that the plans of our longtime enemies, but erstwhile allies, in the Kremlin are based on the assumption that the United States will destroy itself as a world power through inflation followed by a crushing and ruinous depression. If that is the case, it would be natural for these plotters against freedom and the peace and security of the world to help us along by providing some additional opportunities to indulge in our popular pastime of squandering. If the next war is conducted on the same economic basis as the last one, the architects of the slave state will surely have the satisfaction of seeing us defeat ourselves without military intervention on their part.

The government printing press is a deadlier enemy of the United States than the Communists. We fear the Communists, but we love the printing press. The millions of persons who have become acquainted with the government check during the past 17 years are a formidable inflationary bloc.

These people send representatives to Washington to protect their places at the public trough, and while there is some talk about trying to dislodge them, the talk will probably come to nothing if their representatives perform the service for which they were elected. The tendencies in war are to put more people at the public trough rather than restrict the power of those already there.

In war there is only one really indispensable control, and that is control of money; yet it is the control that lawmakers are the last to impose. When money is controlled, rationing becomes almost completely unnecessary. If the supply of money is kept in proportion to the supply of purchasable goods, rationing becomes a farce. When the Government pours mountains of money into the pockets of millions of people, it must then resort to the ludicrous expedient of trying to keep them from spending it—a perfectly idiotic proposition.

Excessive Government controls are stepping stones on the road to tyranny, and if our Government deliberately creates more and worse inflation in this war than it did in the last, we must have more and sterner controls, and if the inflation becomes grievous enough, the controls have got to be grievous enough to combat it, but they will never combat it successfully. The way to avoid the horrors of inflation is to avoid the inflation itself. It is so easy to avoid if a united people will merely exercise common sense in the conduct of their fiscal affairs.

Whatever goes into the war is separate and apart from commercial enterprise. There can be no profit in the production of war goods, because such goods can never enter the channels of trade and must therefore be the gifts of the people to their Government. For the Government to be pretending to give to the people something that the people should be giving to the Government is economic lunacy.

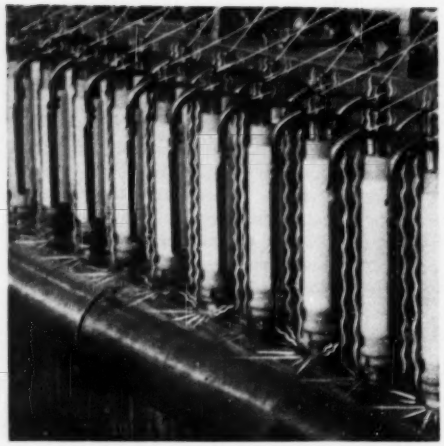
LABOR RULINGS

If no valid union-shop contract was in effect, discharge of employees on union request on ground employees had not paid union dues is both employer and union unfair labor practice.

Action of employees to enjoin employer from deducting dues under check-off assignments and remitting them to expelled union is not within jurisdiction of federal courts.

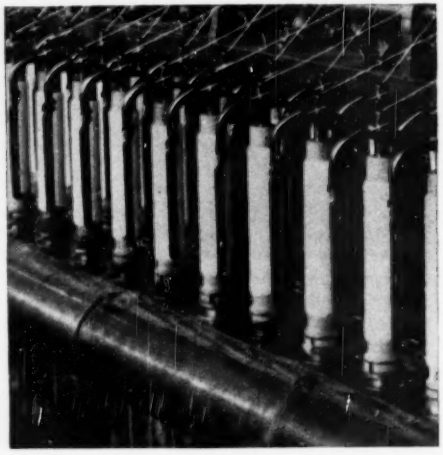
Supplemental agreement providing for 9% increase in "hourly and base rates" does not require increase in piece rates.

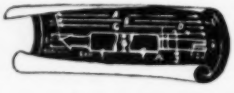
Unemployment compensation is not due employees idled during vacation period, requested by union, for which they received no vacation pay, although some other employees in unit received vacation pay.



Orders keep piling up . . . but even at this slow speed our flyers and spindles are taking a beating from that vibration. Can't get a decent bobbin, and uniform quality is impossible with our roving jerking and straining this way.

Since Ideal rebuilt our flyers and spindles they fit perfectly. They're balanced to *our* running speed for smooth, steady operation. We're getting better roving—and more of it—on every bobbin. Looks like we're set for even more business!





Spindles are rebuilt to factory blueprint specifications with a tolerance of .0005" on our modern equipment.

Flyer barrels are drawn in .003" undersize with Ideal's pneumatic swaging machine, reamed to factory specifications by exclusively built tapered reamers, and balanced *at your specified* running speeds. You get your choice of Ideal's famous RCK finishes:

RCK BLACK—glossy, highly rust resistant.
RCK BRIGHT—highly polished, ideal for rayon or cotton.
REGULAR FINISH—preferred for some uses.

We furnish extra roving spindles and flyers while yours are being rebuilt.

IDEAL MACHINE SHOPS, INC.

Phones 4161 and 4391

BESSEMER CITY, NORTH CAROLINA

26TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

Full-Fashioned Production Tips

Staff Prepared

EXCLUSIVE

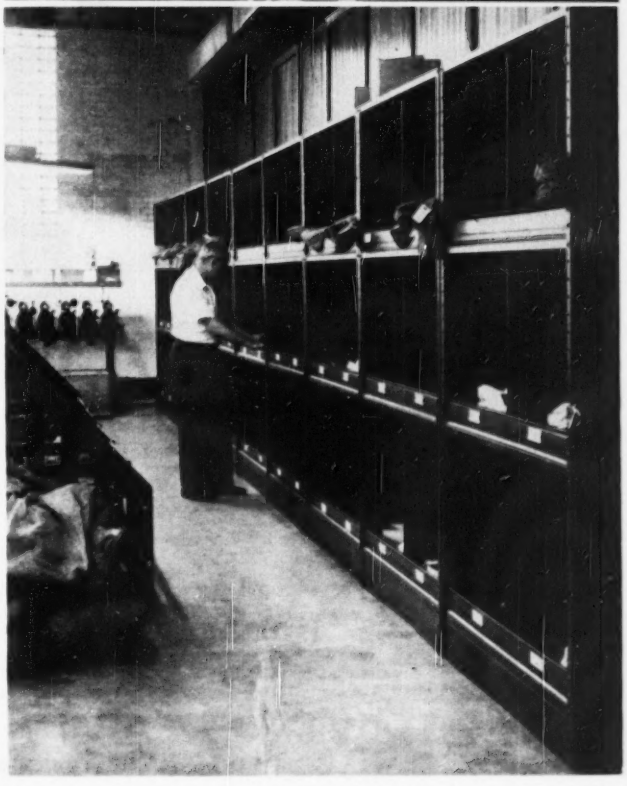
Grey Goods Inspectors Aid Efficiency

Grey goods inspectors stationed at the end of each aisle of full-fashioned knitting machines can exchange menders for good stockings before they leave the aisle. This prevents confusion in identifying stockings to be returned to the knitter for replacement. The inspectors can also discourage knitters from looking over and handling stockings before turning them in—a practice which oftentimes causes additional pull threads.

Uniform Bundles and Storage Bins

In one full-fashioned mill, hosiery in lots of five dozen pairs are placed in bags which are kept in individual storage bins assigned to each respective knitter. The small lots and bags serve to prevent tangled and damaged hosiery resulting from trying to handle too many stockings in one bundle.

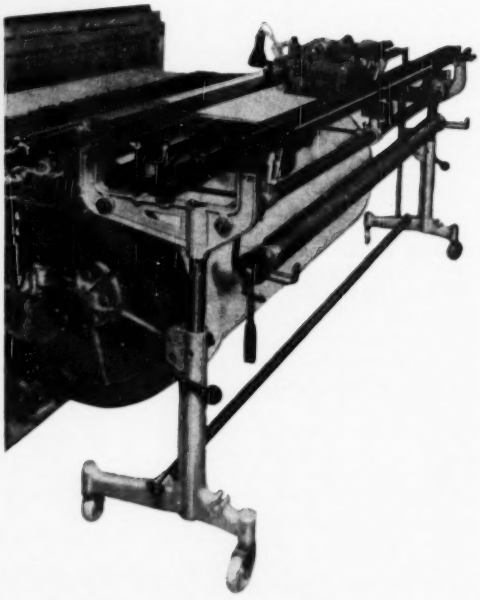
All operatives are encouraged to handle stockings only by the toe and welt as a precaution in preventing snags and pull threads. The storage bins prevent congestion and damage to bundles which otherwise would be stacked carelessly. In addition, the uniform number of stockings in each bundle and the storage bins serve to keep each knitter's work segregated for convenience in figuring pay and production.



Warp Tying accelerated

from 30% to 70%

with the "Little Uster"



USTER

Here are several typical examples:

Tying 20 warps of 3,120 ends of 24's—30's cotton in 8 hours in a Carolina mill.

Tying 10 warps of 10,000 ends of filament rayon in 8 hours in a Virginia mill.

Tying 12 warps of 6,000 ends of 16's—20's cotton in 8 hours in an Alabama mill.

Tying 8 warps of 11,000 ends of filament Nylon and rayon in 8 hours in a New England mill.

Tying 12 warps of 8,000 ends of filament rayon in 8 hours in a Pennsylvania mill.

Whether tying cotton, wool, worsted, rayon, Nylon, asbestos, plastic, or warps containing a combination of different yarns, the "Little Uster" does the job right—operating either portable or stationary.

The "Little Uster" is the most versatile, fastest, and most efficient warp tying machine made. For more information write for booklet 72A.

In Canada:
Hugh Williams & Co.
47 Colborn Street
Toronto, Ontario

USTER CORPORATION, CHARLOTTE, N. C.
80 Boylston Street, Boston 16, Mass.

Dyeing Wool Stock, Tops, and Yarn

By ROBERT W. JOERGER

Article 5*: Vat Dyes

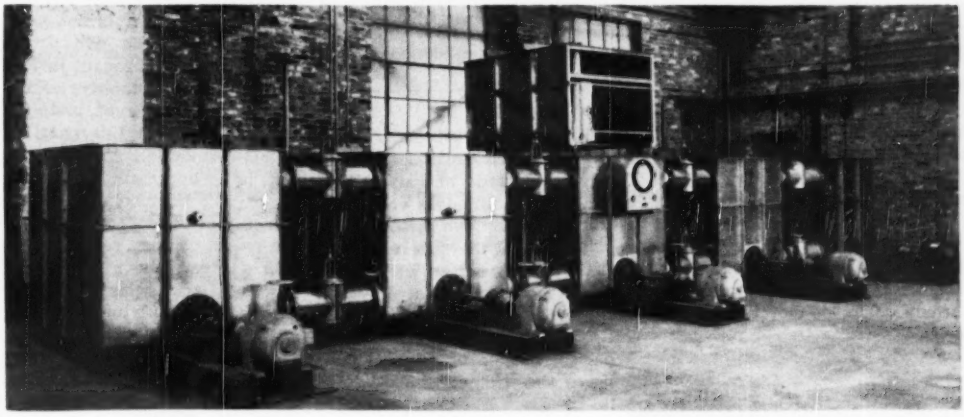
ATTENTION is now invited to the other classes of dyes used for coloring wool.

Basic colors may be dismissed in a few words because they are not used to any great extent today. They were important when first discovered, but since then many have been sulphonated to make the corresponding acid colors; in this form they are easier to apply and produce a color with better rub fastness. Two basic dyes, Victoria Blue B and Rhodamine B, are sometimes used and dyed somewhat like acid colors.

A few direct cotton colors have good affinity for wool with good fastness to washing and milling; actually their fastness to light is better on wool than on cotton. However, their use is limited to less expensive materials and some knitting shades. Examples are: Benzopurpurine 4B, Chrysophenine, and the Diamine Fast Red F types of dyestuffs.

Properties of Vat Colors. For a general account of the origin, manufacture, properties and preparation of dye solutions of the vat colors, the reader is referred to Article 6 of the author's series "Processing Procedures for Modern Yarn Dyeing" as published in TEXTILE INDUSTRIES for March, 1947. The dyeing methods for this class of dyes are different

*Articles 1, 2, 3, and 4 were published in the April, May, July, and August issues.



Obermaier-Stienen Worsted Skein Dyeing Machine

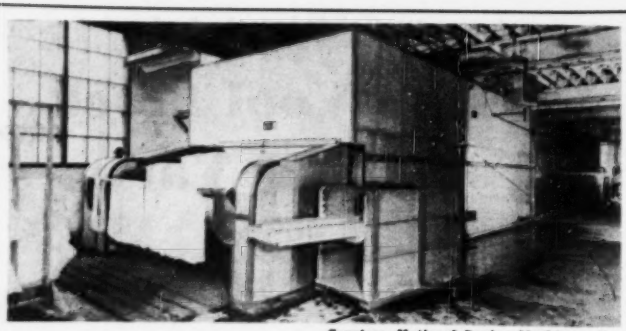
Developed for the dyeing of fine worsted yarns in skein form, the Model G A W E T dyeing machine is divided into two sections. The larger section serves as the dye kier and receives the yarn carrier. The smaller section serves as a dyestuff feeding tank and heating chamber.

The yarn is held in the material carrier in staggered position between two sticks. These sticks hold the yarn at the top and bottom. This arrangement of yarn in the material carrier prevents the yarn from swirling as the dye liquor is circulated.

The propeller circulating system provides a high rate of flow at a very low pressure for even dyeing.

The accompanying installation photo shows five of these machines coupled together by means of a hook-up system which enables the dyer to use the series of machines as individual units or as one large unit. Note the third machine from the left. The yarn carrier is raised and the manner in which the skeins of yarn are suspended between two sticks is visible.

Courtesy, Standard Fabricators, Inc.



Courtesy, National Drying Machinery Co.

Drying Machine for Skein Yarns

Three operations take place as skein yarns, both wool and worsted, pass through this machine. The main body of the enclosure is divided into three compartments, the first of which is drying, the second cooling, and the third conditioning.

After the yarn is extracted, it is placed on aluminum tubes 9 feet long and 1½ inches in diameter. The poled yarn is then deposited on a pair of specially designed conveyor chains and carried into the machine.

In the drying chamber hot air, the temperature of which is constantly and automatically controlled, is circulated over the yarn until it is dry.

The dried yarn then passes into the cooling chamber where air at room temperature is passed through the yarn, preparing it for conditioning or moistening.

The conditioning chamber is equipped with fans, louvres, atomizer heads, radiation, etc. Temperature of the circulated air and the humidity are both under continuous automatic control. Dry and wet bulb readings may be changed instantly to increase or decrease moisture in the circulated air.

To further increase processing control, chain conveyor speeds may be increased or decreased.

for wool, as are the fastness properties.

These dyes when applied to wool show increased fastness to light as compared with the same colors on cotton, and this is especially true with pale shades where some of the best acid and chrome colors do not hold up so well. The vat colors are also very fast to washing and milling, to perspiration, salt water and cross-dyeing, and in other respects they are superior to the wool colors normally used.

For the aforementioned reasons these colors are finding increasing use for uniforms, overcoating, quality men's wear; for knitting trade for sweaters and bathing suits; for blankets, carpet yarns, automotive fabrics, and for shrink-proofed wool where these faster colors will out-last the article made. It is to be noted that their excellent fastness properties recommend them where increased wash fastness and especially maximum light fastness is desired.

The wool trade and dyers are not turning to vat dyes very eagerly because the dye methods are so different; if they are not well understood, the danger of damaging the wool is increased. Also, there is the question of cost. The vat dyes as a whole are more expensive than the usual wool colors and the percentage used is a little greater. But these disadvantages are offset by the shorter running time and lower temperatures required for processing a lot. This means that there is a saving in labor and steam, and production per machine is increased. Compared with wool dyed with chrome colors (especially those which have to be boiled a long time for sake of match or levelness), the condition of wool dyed with vat colors is generally better; it spins better and finer counts can be made, while the amount of noils or spinning waste is reduced. Vat dyed material shows better tensile strength, often 10% more than material dyed with the corresponding chrome shade. In terms of price of the final fabric, the cost difference may be only two or three cents more per yard.

Methods of Application. Vat dyes can be applied to wool in all stages of manufacture, and all of the regular types of machines are used. Indigo is most generally applied on piece goods, very little on yarns or slubbing, sometimes on raw stock. Other vats are applied in all stages but probably less in loose form. In all cases it is important that the wool be free from grease, because poor rub fastness and less brightness will result when the dyes are not fixed on a clean bottom.

Where wool has been carbonized, it is especially important that it be thoroughly neutralized and brought to a pH near that of the dyebath. This is generally done by adding to the water that makes the dyebath the excess alkali and hydrosulphite that is not needed for dissolving the dye. In this way the wool is brought into condition to receive the dye solution, the oxygen is removed, and a good wetting agent at this point also helps remove all the entrapped air. It is important that all the material is kept below the liquor during the dyeing so that no partial oxidation and its resulting unevenness can happen. This is especially true when using open machines for applying the dye.

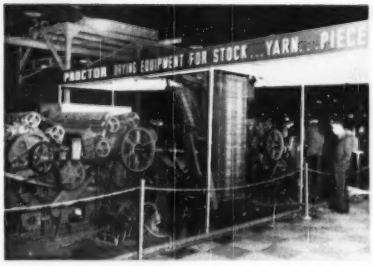
Indigo. Indigo has been applied to wool since ancient times by dissolving it with crude alkalies (such as lime, wood ashes) and the fermentation product of bran, crude sugars, etc. Such crude methods may still be practiced in less developed areas of the Orient, but modern methods provide better control of the alkali by using relatively pure caustic soda, ammonia, etc., and sodium hydrosulphite as a reducing agent. Generally glue is added to the dyebath to serve as a leveling agent and to protect the wool from excessive alkali. The dyeing of wool

Production conscious textile men pick

PROCTOR *Metallic Worsted Cards*

It is no wonder that production conscious textile men all over the world are today selecting the Proctor metallic worsted card. In mill after mill, output records indicate that this modern card usually doubles production. Usually, one Proctor metallic worsted card replaces two older types. Not only is production usually doubled—but the quality of the card sliver is improved . . . and card waste is greatly reduced with a resultant greater yield of finished carded sliver.

Many of the best known mills in the industry are now completely equipped with these new cards . . . Forstmann, Julliard, Cleveland, Hird and National, to name a few in this country. Recent installations abroad have gone into mills in Sweden, France, Argentina, Peru, and Morocco.



The tremendous interest that was shown in the Proctor metallic worsted card that was exhibited at the American Textile Machinery Exhibition in the Spring, has revealed many other production conscious textile men who are planning to switch to this modern card.

If you would like concrete production records on the performance of these cards—or would like to have us project, in black and white, what could be done with an installation of these cards in your mill—write today.

AVOID PRODUCTION DELAYS...

If you are already operating Proctor equipment—you can avoid costly time-out by maintaining an inventory of certain replacement parts. Let us recommend the parts you should stock!

PROCTOR & SCHWARTZ · INC·

PHILADELPHIA 20 · PA·

Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT • CARDING and GARNETTING MACHINES • DRYERS FOR STOCK • YARN • PIECE GOODS • NYLON SETTING

IF YOU DRY OR CURE

SPUN RAYONS
SILK PIECE GOODS
TOWELING
TERRY CLOTH
OR SIMILAR FABRICS

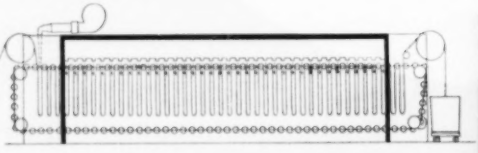
The PROCTOR LOOP DRYER

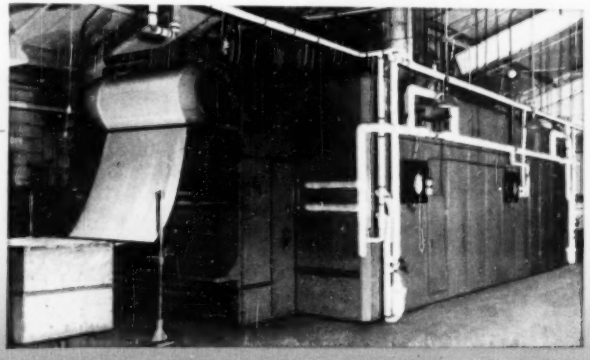
can increase your plant efficiency . . .

Originally used for drying washed dye-house goods and material like toweling, this Proctor dryer has been refined over the years so that today its application is much wider. Many mills handling spun rayons and similar goods that require carefully done finishing are finding this a highly efficient machine for drying or curing.

The design of the dryer is such that it takes advantage of every means to provide greater drying or curing capacity with minimum power consumption. This makes an important contribution to overall plant efficiency. In addition to the general operating efficiency that is possible with this high capacity dryer, the refinements in design assure positive control of fabric quality. Loops are perfectly and uniformly formed at the feed end. A perfected air looper is incorporated in the design of the machine for use where cloth characteristics indicate. Sliding baffles that change the opening in the nozzles, by means of which air is directed down into the loops of cloth, make possible positive control of amount of air circulated. There are several recent changes in design worth noting: 1—The drive mechanism for the feed and delivery end drums has been improved; 2—Girt construction has been simplified, eliminating the old style mechanism used for turning the girts, yet retaining the revolving action of the girts. Revolving, covered girts have long been a part of the design of this dryer. This feature prevents goods from incurring stick marks which may result if the cloth were in contact with a heated metallic surface for any appreciable length of time.

If you are engaged in drying washed dye-house goods, toweling, or curing fabrics of the spun rayon type—it will pay you to investigate the Proctor Loop Dryer.





AVOID PRODUCTION DELAYS...

If you are already operating Proctor equipment—you can avoid costly time-out by maintaining an inventory of certain replacement parts. Let us recommend the parts you should stock!

PROCTOR & SCHWARTZ · INC·

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Designers and Manufacturers of

AUTOMATIC BLENDING and STOCK CONVEYING EQUIPMENT • CARDING and GARNETTING MACHINES • DRYERS FOR STOCK • YARN • PIECE GOODS • NYLON SETTING

with indigo is a highly specialized operation for which not every dyehouse has the equipment or experience. Therefore the subject will be treated rather briefly here.

A typical formula for dissolving indigo is as follows:

15 lb Synthetic Indigo (20%) paste
2½ gallons water at 140 F
1½ lb caustic dissolved in 1 pint water
3 lb sodium hydrosulphite
Warm to 120 F; let stand 30 minutes until clear yellow.

In the meantime the wool dyebath is prepared with the following:

¼ to ⅓ pint ammonia (28%)
½ to 1 lb sodium hydrosulphite
¼ to ½ lb glue dissolved in 10 parts water
100 gallons water at 120 F

The amount of alkali must be carefully controlled since too much will result in damage; too little in poorly dissolved dye. Both the glue and ammonia help maintain the indigo in solution or in a fine suspension suitable for dyeing. The depth of shade is controlled by the number and duration of the dips. In continuous methods the dyebath may be used for a week or more, replenishing the dye used from time to time.

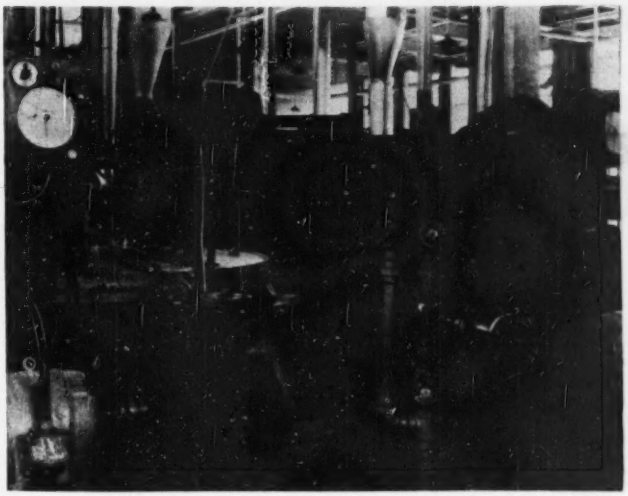
Indigo dyed on wool has good fastness to washing and excellent fastness to light (much better than indigo on cellulosic fibers), and the fading is so uniform that the change seems very gradual. For this reason indigo is extensively used for dyeing wool navy blue for use in uniforms for both military and civilian personnel.

Continuous Indigo Dyeing. During the war when demands for indigo-dyed wool greatly increased, the piece-dyeing machinery in operation was not sufficient to meet these requirements. Also, the quantity of 32-oz. kersey needed by the services presented quite a problem because it was difficult to obtain good penetration of the dye; lighter fabrics such as the 11-oz. flannel and 16-oz. melton were much easier to process. Therefore, a new and speedy method for dyeing wool in the raw stock form was developed.

Briefly, the loose wool is run through a machine that is practically a duplicate of the raw wool scouring train. The indigo dye train consists of eight bowls—the first is used for wetting-out; the second for dyeing; the third for oxidizing; the fourth for rinsing; the fifth for dyeing; the sixth for oxidizing; and the seventh and eighth for rinsing. Forty-five minutes are required for any part of the wool to go through this dye train and the dryer, and 550 pounds are dyed each hour.

The two dye "dips" last six minutes each. The indigo content of each is approximately 1.2 lb of paste per gallon, and the indigo taken up and deposited is close to 7%, of which the first dip contributes about two-thirds and the second dip one-third.

The oxidation dip is for a period of 1½ minutes in hydrogen peroxide solution containing 8 grams per liter of oxygen at 120 F; the rinses are at 140 F. As with all indigo dyeing, there is considerable rubbing off in the spinning and shearing operations, but after fulling and a dry-cleaning the goods meet the rigid requirements of the U. S. Navy. This method is cited as an example of American efficiency wherein a difficult problem was solved with excellent results.



Courtesy, Taylor Instrument Co.

AUTOMATIC CONTROLS are widely used today for the various processes in the dyeing of wool stock, tops, and yarn. Note the instrument at the extreme left in this photo.

Very few goods are dyed with 100% indigo; part or half of the shade is first dyed with indigo, and the remainder with chrome colors. This provides an easier way to match shades and obtain the desired over-hand tone, as well as better rub fastness than where 100% indigo is used. The indigo part, of course, may also be dyed by use of the soluble derivatives.

Indigo Derivatives. Other indigoids and related dyes, such as the Helindon class, may be used for dyeing wool with a quite complete range of shades that have the many excellent fastness properties outlined above. However, these dyes have never been very popular in this country or England, but are much more widely used on the continent of Europe.

The dyes are dissolved in a stock vat with the amounts of dyestuff, water, caustic soda and hydrosulphite as recommended by the dyestuff manufacturer. The dyebath is prepared with

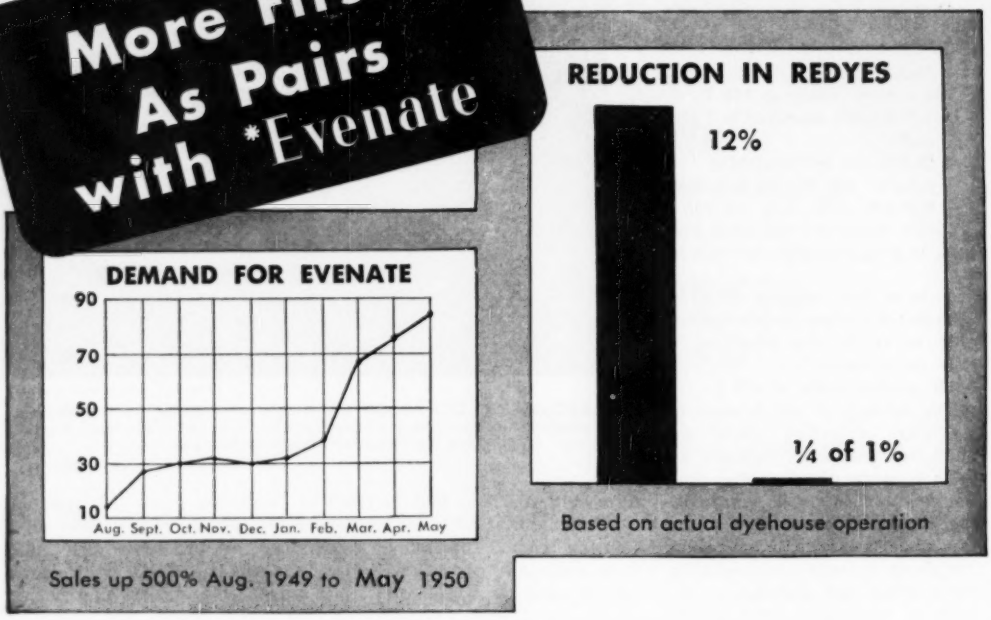
1 to 3 pints ammonia (28%)
1 to 3 lb glue dissolved in 10 parts of water
1 to 2 lb hydrosulphite per 100 gallons.

These amounts may be reduced by one-half where the liquor

(*Continued on page* 193)

More Firsts As Pairs with *Evenate

*Evenate is a thin paste readily soluble in the dyebath. It is a non-ionic condensate combined with a glyceride.



Let us show you the difference in hosiery treated with Evenate in the dyebath — the faster pairing that can be done . . . the fewer variations in shades that occur . . . how accurately different dye lots can be matched.

Check these results obtained on Nylon hosiery with this amazing new dyeing assistant:

(1) Redyes reduced from 12% to ¼ of 1% — the customers' figures, not ours.
(2) Better control of dyebath.
(3) Better unions between leg and welt.
(4) Better penetration.

Evenate make redyeing operations more economical. Even in mixed dye lots, Evenate reduces shade levelly, holds unions to shade without stripping.

Try Evenate in your production. Works equally well with acid colors and acetate dyes. Write for full details.

AMALGAMATED CHEMICAL CORP.
Philadelphia 34, Penna.
Southern Div.: 1819 Spring Garden St., Greensboro, N.C.

Amalgamated

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Automatic Roll Beam Cleaner for Roving Frames

This item was submitted in a recent Kink Contest. For details about the current contest, please refer to the box on page 155.

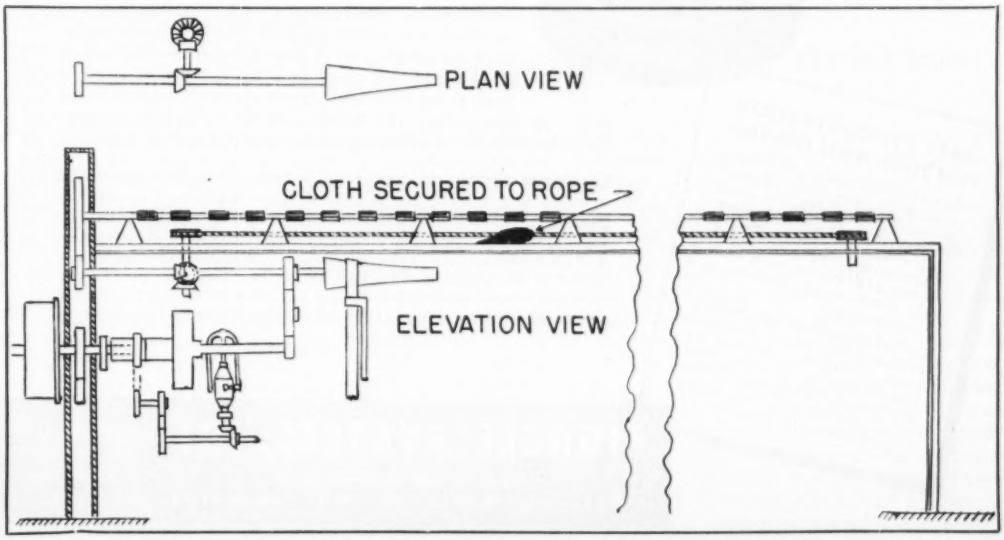
EDITOR TEXTILE INDUSTRIES:

To give roving frame tenders more time for other duties connected with their job, we have an automatic cleaner designed to eliminate manual cleaning of the roll beams.

As shown in the accompanying sketch we use an endless rope, mounted on pulleys at the head-end and foot-end of the frame. The rope runs underneath the rolls and over the beam. To this rope is attached a square of clearer cloth. The pulley at the head-end is placed just inside the first stand and is driven from the top comb shaft. This pulley furnishes power for the rope drive which in turn drives the pulley located just inside the last stand on the foot-end. As the rope moves it carries the cloth around, and this keeps the lint from accumulating underneath the rolls on the beam.

To get power from the top comb shaft to the head-end pulley we use a 25 tooth bevel gear on the top comb shaft. This drives another 25 tooth bevel gear which is connected by a stud to a 17 tooth bevel gear. This in turn drives a 35 tooth bevel gear fastened to the same stud as the rope driving pulley. A split gear is used on the comb shaft for easier application. The diameter of the pulley can be determined by the width of space under the rolls that will require cleaning.

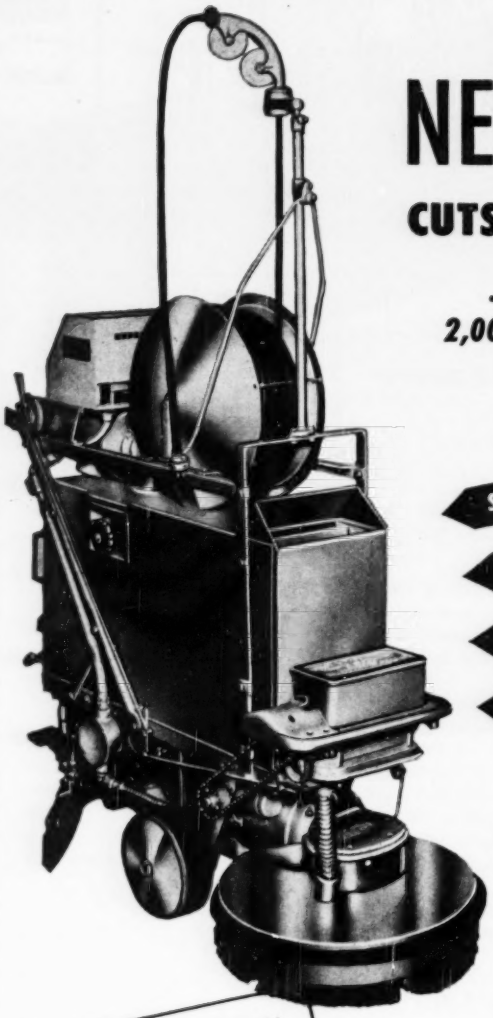
This cleaner has eliminated all



NEW *SCRUBBER-VAC*

CUTS CLEANING TIME 2/3

. . . for Small-Area Mills with 2,000 to 15,000 Sq. Ft. of Floor Space



Scrubs, Rinses, and Picks Up in ONE Operation

Designed to Permit Use in Narrow Aisles

Handles BOTH Wet and Dry Work

Can be Leased or Purchased

Now the labor-saving advantages of *combination-machine-scrubbing* are available to small as well as larger mills. With the *new 418P Finnell Scrubber-Vac*, small-area mills with 2,000 to 15,000 sq. ft. of floor space can clean their floors in *approximately one-third the time* required with a conventional 15 or 18-inch scrubber-polisher using separate equipment for picking up. A *Finnell Scrubber-Vac* speeds cleaning by handling four operations in one! It applies the cleanser, scrubs, rinses if required, and picks up (damp-dries the floor) — all in a single operation. And the machine is self-propelled—operator merely *guides* it.

Of narrow design, the *new 418P Scrubber-Vac* also meets the need in larger mills for a combination machine that can be used in congested areas, narrow aisles, and weave room alleys. Handles the dry work (steel-wooling, et cetera) as well as the scrubbing. And all the refinements of *Finnell's* larger combination machines are embodied in this smaller unit (18-inch brush ring). Has new type of water valve that *assures* uniform flow of water . . . powerful vacuum for efficient pickup (performs *quietly*) . . . a *Finnell-developed* trouble-free clutch . . . G. E. Motors and Timken Bearings.

FREE DEMONSTRATION ON YOUR OWN FLOORS!

See what you would save with a *Finnell Scrubber-Vac*. *Finnell* makes several models and sizes. Incidentally, it's good to know that when you choose *Finnell Equipment*, a *Finnell* man is readily available to help train your maintenance operators in its proper use.

For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1310 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

hand cleaning of the roll beam, weight hooks, and levers on roving frames and costs very little per frame to install.

CONTRIBUTOR No. 8312

Keeping Heel and Toe Stitches Even

EDITOR TEXTILE INDUSTRIES:

In the manufacture of stockings on circular type machines, why is it so difficult to keep the stitches of the heel and toe even?

Any information that the readers of your publication can give me to help correct this problem in my plant will be greatly appreciated.

CONTRIBUTOR No. 7925

(Two answers to this question were secured by the editors before it was published in the magazine. These are given here. Other opinions will be welcomed.)

EDITOR TEXTILE INDUSTRIES:

If the fixer keeps the bumper screws adjusted and stitch cams changed when they are old and worn, lots of the trouble that CONTRIBUTOR No. 7925 is having will be eliminated. Also, the sinker cam should be adjusted in proportion to the bumper screw and stitch cam.

A fixer that maintains his machines properly as the days go by will not have much difficulty on this question. However, merely "getting by" on each machine that he fixes will eventually cause so many jobs to come up at one time that one man can not possibly run the job by himself.

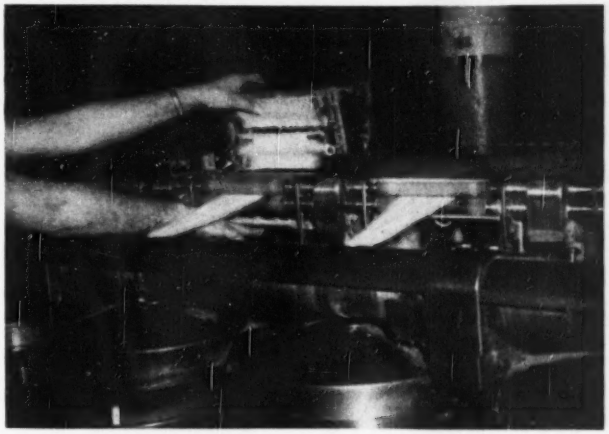
CONTRIBUTOR No. 7926

◆

EDITOR TEXTILE INDUSTRIES:

We have found that ninety per cent of the time a worn stitch cam on one side of the machine causes uneven stitches in stockings. It is necessary to replace these worn stitch cams to eliminate the trouble described by CONTRIBUTOR No. 7925.

CONTRIBUTOR No. 7927



SPRING TYPE TOP ROLL CLEARER

Top rolls on drawing and roving frames at Glendale (S. C.) Mills are kept thoroughly clean by a recently developed spring pressure top clearer.

A small spring working on a shaft at each end of the clearer exerts a downward pressure on the clearer which in turn presses against the top rolls. Clearers are adjustable for different roll settings.

A drawing frame at Glendale equipped with the spring type top roll clearers is shown in the accompanying photo. Note that bottom rolls are also fitted with spring type clearers as described on page 113 of the October, 1948, issue of TEXTILE INDUSTRIES.

Reclaiming Filling Bobbins

Question Briefed: *What method is recommended for reclaiming soiled or tangled filling bobbins?* (CONTRIBUTOR No. 8264, *May*, 1950)

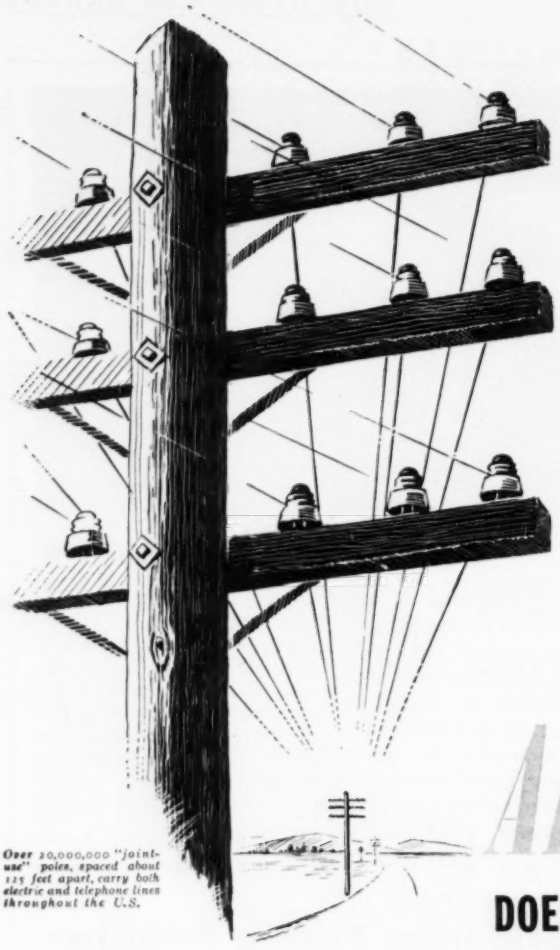
EDITOR TEXTILE INDUSTRIES:

Some years ago the writer was employed as superintendent of a weaving mill in South America which had a most successful method of handling this problem.

An old reeling machine that ran fairly slow was employed. On one side only of the reel filling bobbin clips from old shuttles were installed. These were spaced 3" to 4" apart along the full length of the reel. A young boy or girl pressed the damaged filling bobbins into the various clips. The end of the thread was thrown over the slow running reel, with no attempt being made to tie one thread to the other. The turning reel wound off the yarn from the damaged filling bobbins.

When the reel was filled to capacity with yarn, it was stopped. The operator then tied string around each lot of yarn that had been reeled from each bobbin position. The reel was next given a half turn. A sharp knife was used to sever the yarn from the reel.

The yarn taken off was in bun-



Over 20,000,000 "joint-use" poles, spaced about 125 feet apart, carry both electric and telephone lines throughout the U.S.

Amprozyme

DOES TWO JOBS AT ONE TIME

New De-Sizing Powder Converts Both Starches and Proteins in One Operation

Amprozyme does two jobs better, faster and cheaper. It eliminates the guess work from de-sizing by digesting either starches or proteins, or both, at the same time and in the same operation. If the size is starch, Amprozyme's amylolytic enzymes go right to work. If a protein size is present, its proteolytic enzymes start attacking. Amprozyme insures rapid and complete de-sizing of cottons, rayons, and mixed goods, resulting in a good hand and uniform ground for perfect dyeing, without streaks or shading. Amprozyme eliminates the necessity for two different agents or two separate operations thus reducing storage, handling and shipping costs. It can be utilized at normal or elevated dyebox temperatures, in a wide pH range. Amprozyme also remains stable longer. Detailed information and a sample for a test run are available upon request.

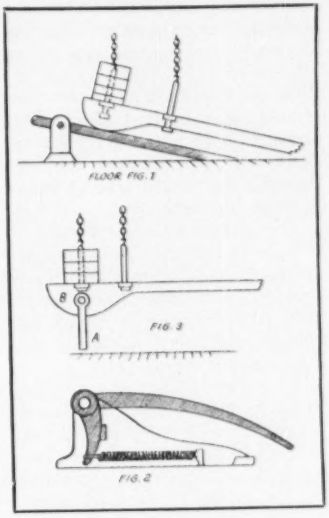
Plants: Passaic, N. J.
Carlstadt, N. J.
Los Angeles, California

WOLF BRAND CHEMICAL SPECIALTIES

JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

dles approximately 54" long and about 3" in thickness. This was sold to garages for polishing autos; also to cotton waste plants for reclaiming into filling (condenser spun) for cotton blankets and such goods. Since it is so easily handled in this state, feels soft, looks clean, and is entirely free from tramp metal, it brings the highest possible price on the cotton waste market.

CONTRIBUTOR No. 8326



Preventing Ends Down in Mule Spinning

EDITOR TEXTILE INDUSTRIES:

Some of your readers engaged in mule spinning woolen yarns may be interested in some suggestions which I have found to be helpful in my work with mules. Preventing ends down is a production "must," and I believe my suggestions are worthwhile in sustaining good production.

When the mule carriage has completed the outward run, at the expiration of "knocking out and ratching" the yarn has attained its maximum tension during the spinning period. At this point it is necessary to unwind the yarn from the spindle blade and transfer the faller wires from spinning to winding position. The reversal of the spindles causes the yarn to become slack until the upward movement of the counter wire takes control. This period of slackness is detrimental to the yarn because at this stage the yarn is lively and likely to become tangled. It is essential that this period of slackness should be as short as possible.

To attain a short period during which the yarn is slack, the backing-off chain, which to a great extent determines the duration of the slack period, should be as taut as the strength and character of the yarn will permit.

There is always present the danger of applying tension too suddenly. This is particularly true during backing-off because the operation must be performed quickly, if we wish to get good quality yarn and high production. To fully realize the necessity of gradual application of tension one must remember that the mule, unlike the ring spinning frame, does not have an individual tension for each end.

The total ends of the mule collectively balance the weights of the "salmon head" levers or weighted levers. A small number of ends may possibly bear two, three, or more times their proportionate share of the total tension while others may bear practically no tension.

If the tight ends are broken, the yarn suspended between the spindle and rollers usually attaches itself to an adjacent end. This causes trouble at subsequent processes and also places additional work on the mule operator.

To apply tension gradually during the backing-off period and in the first few inches of the inward run, the easing motions shown in the sketches may be employed. These are fastened to the floor in the middle of the mule gate and in such a position that the

Kink Contest

$ $ Your Idea May Win $100 $ $

This contest ends November 15, 1950

ONE HUNDRED DOLLARS will be awarded for the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea submitted by November 15.

Contributions eligible for the prize must not have appeared elsewhere and must not be sent to any other publication.

All material will be paid for at regular space rates upon acceptance irrespective of the contest winner. Advise when submitting entry if participant's name may be used. Only one award will be made in each contest.

Participants are not restricted as to number of items submitted to compete in the contest. Each entry should be described in sufficient detail to make it easily understood, and where possible, glossy photographs or pencil sketches should be included. Finished drawings are not necessary.

All entries for this contest must be postmarked not later than midnight, November 15, 1950. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

weighted levers rest on them (as shown) when the carriage is "on the catch."

When the mule backs-off, the weights so supported have no influence on yarn tension until the operation is completed and the carriage has moved several inches towards the roller beam.

The arrangement shown in Fig. 2 is technically the best arrangement, for as the carriage moves away from the catch the effectiveness of the spring is reduced as the weight lever moves farther away from the fulcrum.

In practice the inclined and fixed lever shown in Fig. 1 is sufficient. Only a third of the "salmon head" levers have their weights relieved; the other two-thirds operate in the usual way.

Since the relieving motions shown in Fig. 1 and Fig. 2 are placed on the floor of the mule gate, they are likely to be kicked by the operatives, and they present an obstruction which can cause accidents. For this reason the writer adopted the arrangement shown in Fig. 3. This arrangement is very effective.

The lever (A) is loose on the stud (B), and its length is such that it just misses the floor when the "salmon head" lever is in spinning position as shown. When the front faller chain or strap becomes slack during the backing-off period, the lever touches the floor and supports the weights. The movement of the carriage at the finish of the backing-off operation moves the lever forward and allows the weights to tighten the chain. The lever then trails along the floor ineffectively.

When the carriage reaches the end of the inward run, and the fallers are put into spinning position, the levers hang down vertically, ready for the next backing-off operation.

The use of easing motions allows more weights to be placed on the levers. Without them the weights must be reduced to permit the yarn to withstand the backing-off tension.

CONTRIBUTOR NO. 8238

Cleaning Full-Fashioned Machines

EDITOR TEXTILE INDUSTRIES:

We should very much appreciate from your readers any information regarding cleaning schedules on full-fashioned knitting machines. We are anxious to reduce our machine down time and believe that adoption of a more satisfactory cleaning schedule will be helpful.

CONTRIBUTOR NO. 8330

(The cleaning schedule as practiced in one knitting mill is presented here. Other mill men are invited to send in their recommendations on this matter.)

EDITOR TEXTILE INDUSTRIES:

Reading hosiery knitting machines can be satisfactorily maintained with a reduction in overall down time if the following cleaning schedule is adhered to:

1. General wipe down of entire machine with particular emphasis on table, needle bars, top catch bar, knock-over, tops of sinker head, tops of carrier rods, and snappers.

2. On the basis of six to eight heads per operator, two and one-half hours should be spent in cleaning once monthly. One half hour weekly should be devoted to cleaning on 15 denier work; one hour weekly for 20 denier work; and when excessive size stripping is encountered on 15 denier work, clean one hour weekly.

Our operators are paid on a time basis for care and maintenance duties.

CONTRIBUTOR NO. 8331

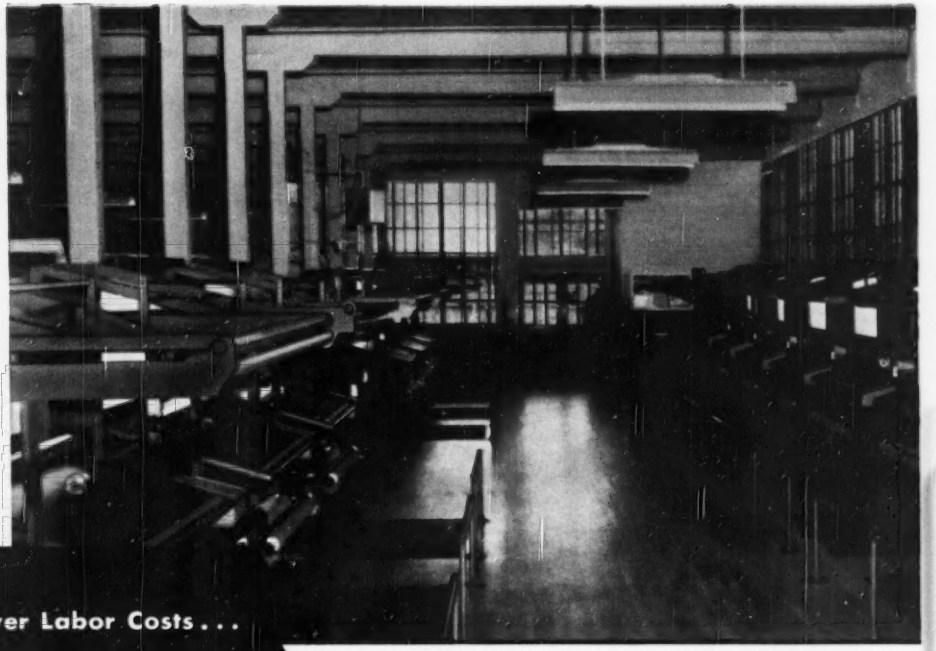
Reduction of Reworkable Waste in the Card Room

EDITOR TEXTILE INDUSTRIES:

One of the greatest losses in a cotton mill may be attributed to a high percentage of reworkable waste; especially in the card room. Most supervisors and employees do not pay too much attention to this type of waste because they do not visualize any actual waste as compared to strips, sweeps, and fly, because the material is sent back to the opener room and fed into the stock. Not too much of the material is actually lost as waste, but a certain amount of fibers are broken each time the material is run through the opening and picking machinery. Eventually much of this material ends up in strips or fly at the cards, or in clearer waste on slubbers or drawing. The greatest loss from reworkable waste is in the labor expended in processing the stock up to the process that it is made into waste.

For example: The labor costs to process cotton into roving varies from two to three cents a pound, depending on size roving and machinery setup. In a given period of time, 1000 pounds of roving is put into bad work and is cut off bobbins and sent back to the waste machine as reworkable waste. All of the labor as well as the overhead expended in producing the roving is lost, and the material is sent to the opener room to be run again. Disregarding overhead and the expense of reworking the roving waste, the 1000 pounds of reworkable waste represents a loss of $30.00.

The problem of reworkable



Lower Labor Costs . . .

Better Production . . .

Improved Morale . . .

Vast eye-rest areas feature cloth inspection room after repainting with COLOR DYNAMICS.

Pittsburgh COLOR DYNAMICS

benefits workers and management alike in Dover Mill Company Plant

WHETHER you manufacture durable products or soft goods your plant will benefit in many ways by using Pittsburgh COLOR DYNAMICS.

Actual experience in many industries with this new painting system based upon the *energy in color*, proves that proper "color engineering" improves quality and quantity of output, the cost of production and the well-being and safety of workers.

● **These advantages** are once more demonstrated in the plant of the Dover Mill Company, of Shelby, N. C., manufacturer of quality figured and plain dress goods made of cotton and synthetic fibers.

What COLOR DYNAMICS has accomplished for management and employees alike is best summarized by J. R. Dover, President and General Manager of this company.

● **"A few months ago,"** writes Mr. Dover, "we painted the interior of our cloth inspection room, using a COLOR DYNAMICS plan specified by Pittsburgh. The results in greater efficiency have proved extremely gratifying.

"In an operation such as inspection of textiles, the element of eye-fatigue among operators is a serious one. In "color engineering" this room according to COLOR DYNAMICS, a color arrangement was used that would reduce outside glare and at the same time provide eye-rest areas for the purpose of lessening eye strain and the nervous tension to which it often leads.

● **"We also found** that the color scheme aided materially to improve housekeeping. This is important in a room which must be kept extremely clean for the handling of goods prior to shipment. An added benefit, although more difficult to measure, is the marked improvement in morale among our employees.

"Distinct demarkation of hazard areas, such as elevators, storage racks and heavy rollers, with *safety colors* has also decreased danger of accidents.

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INDUSTRIAL CHEMICALS DIVISION, DEPT. N10

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waste must be attacked from two angles if it is to be successfully combatted. Machinery must be put in tip top condition and kept that way by adopting a systematic overhauling and maintenance program. Employees should be acquainted with the part they will play in the elimination of excessive reworkable waste, and they should be educated to use the most modern methods to eliminate reworkable waste.

Machinery that is not in good condition will make excessive reworkable waste, even though the best and most conscientious employees operate them. A picker that is making laps that tend to split when run in the card will cause excessive waste. Drawing frames that do not knock off properly will contribute to an excessive amount of waste. Cards that are in bad mechanical condition and not set up properly contribute to an excessive amount of waste.

A clean machine makes better work, runs better, and does not produce as much reworkable waste. A system of maintenance should be set up so that all machinery is kept in tip top condition. Adequate maintenance will more than pay for itself in the reduction of waste as well as in increased life of the machinery. A cleaning schedule for each type of machine should be set forth and strictly adhered to. The maintenance program should be explained to all employees on the basis that it will mean more job security for them as well as less work for them, once it functions properly.

Standard amounts of waste allowable for each job should be established, but before this is done, it is a good idea to talk with the employees about it and get their ideas on the subject because they are the ones who will make or break the program. When the standard amounts of waste allowable for each job are established they should be posted so that all employees can study them.

All waste from each job should be taken up each shift and weighed. The supervisor should have a list of each employee posted on the bulletin board, and each day's waste and the weekly total should be shown by each operative's name. If the employee is exceeding the standard amount, the figure should be posted in red, and if his amount is standard or less it should be posted in black. Employees who consistently exceed the standard amount should be warned and given ample time to get waste down to standard before disciplinary action is taken. If, after a reasonable length of time, the overall amount of waste is in the red and all employees are consistent, it is a good idea to check and possibly revise standards.

If an adequate program of machinery maintenance is initiated together with a good system for checking waste, the subsequent reduction of reworkable waste in the cardroom may be surprising.

CONTRIBUTOR No. 8271

Discussion: Effect of Break Draft on Yarn Strength

EDITOR TEXTILE INDUSTRIES:

Recently we have found it necessary to change our roving hank size from .85 to .50 for producing 6s, 7s, and 8s yarn. We are using conventional draft slubbers and Whitin long draft spinning. Will the break draft on either the slubbers or spinning frames, or both, affect the yarn break?

CONTRIBUTOR No. 8297

(In order to immediately serve CONTRIBUTOR No. 8297, *the editors sent his question to two mill men for an opinion. Their answers are published here. Other comments are invited.)*

EDITOR TEXTILE INDUSTRIES:

Break draft on the Casablancas spinning does affect the strength of the resulting yarns. Break draft on the slubber is important but much less critical than in the spinning in its effect on the yarn strength. Anything that improves uniformity tends to improve skein strength.

Break draft in spinning is closely tied in with total draft. As a general rule the larger the total draft, the larger the break draft should be; however this is frequently neglected. Break draft in spinning is also tied in with roll settings which are influenced by length of staple being processed.

Assuming the roll settings to be optimum, it is suggested that a part doff be made on the roving frame using the following break drafts: 1.01, 1.25, 1.50, and 1.75. Spin these with a spinning break draft of 1.375; then test each lot of yarn for strength and uniformity.

Plot the results of strength and uniformity on rectangular coordinates. Connect the resulting points by two smooth curves. If the peaks of the curves coincide, read off the best break draft. If they do not coincide, read the peak at the mean of the two points.

Using the roving break draft indicated, make a full doff of roving using this break draft. Creel this in spinning and then make a part doff with spinning break drafts of 1.20, 1.40, 1.60, and 1.80.

Again test for strength and evenness in the yarn. Plot these results as above. Select the spinning break draft that is indicated by the highest strength and uniformity.

CONTRIBUTOR No. 8298

◆

EDITOR TEXTILE INDUSTRIES:

It is my experience and opinion that in changing from .85 to .50

how

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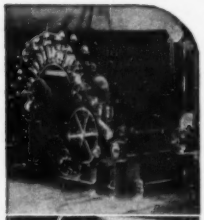
the modern self-fulling self-scouring wool oil adds up to better wool processing at less cost

Carding

Nopco FUA assures:

- Excellent fiber lubrication
- Elimination of static and fly
- No gumming of cards
- Elimination of glazing on leather rub roll aprons
- Cushioning of the leather

Result: Better carding—higher production—loftier, rounder roving

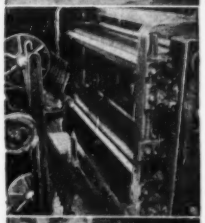


Spinning

Nopco FUA assures:

- Improved spinning—on mules or frames
- Fewer broken ends—because of increased yarn strength

Result: Higher spinning production

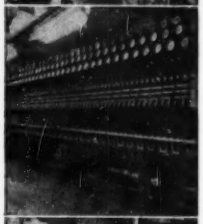


Steaming

Nopco FUA

does not set in the yarn after steaming, nor in the fabric when greige goods are crabbed.

Result: No cloudy, shady piece dyeing

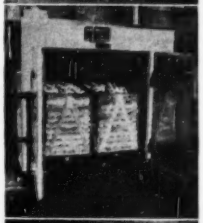


Fulling

Nopco FUA assures:

- Superior fulling (with excellent sudsing action) without addition of soaps or detergents
- Quick, uniform shrinkage—with good cover

Result: Simpler, improved fulling

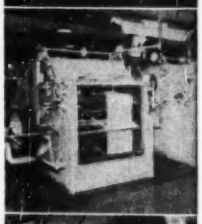


Scouring

Nopco FUA assures:

- Ultra-efficient scouring—again without addition of soaps or detergents
- Shorter rinsing time
- Very low residual oil content (0.2%)

Result: Better, faster scouring



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hank roving break draft will have less effect on yarn strength than other elements of manufacture.

Break draft for roving and spinning frames is usually fixed by the manufacturers of the machinery for a range of total drafts and weight of stock in process. So long as the draft and stock weight is held well within the range of the machine and provided it is operated with proper roll setting, twist, speed, and tension, good quality will result.

In making this change, if the draft of the conventional slubbers can be held within a range of from 3.00 to 4.75, excellent roving can be produced. It is a known fact that high quality roving has been produced with a conventional slubber draft as high as 6.00. This was done under favorable conditions and is not recommended as general practice for long draft spinning from one process roving.

As to spinning, if single creel roving is used, the draft for 7s and 8s yarn will be a little long for best yarn strength and uniformity. For these yarn counts a spinning draft of not more than 13.50 is to be preferred. It is possible that a total spinning draft in excess of 13.50 may affect the yarn strength more than the break draft and yet not be sufficient to cause the mill complaints or rejections.

CONTRIBUTOR No. 8299

Legislation in Associations

(*Continued from page* 89)

labor conventions. In this contrast we see the major weakness of management in politics.

The reports from the associations always tell of the legislation they have succeeded in defeating and that which they intend to defeat in the next year.

Legislative reports to labor conventions tell of the legislation they have had passed and the legislation they intend to have passed in the coming year.

There is a big difference.

Management is on the defensive. Management is constantly fighting *against* something.

Labor is fighting *for* something.

It is easy to see which group wins over a period of years.

If those of us on the side of management are to be successful in promoting legislation—wise legislation that is for the good of business and all the people—we must soon change from negative to positive tactics.

Only recently at one of our state conventions the report was made on a number of bad amendments which were killed in a piece of legislation. But in the same breath the man reporting warned that the manufacturers should *expect* some changes in the law, implying that they were needed.

If the manufacturers should *expect* changes that are *needed*, why don't we assume the responsibility of management and foster such changes, rather than wait and let someone else get credit for it.

Where we all recognize that the legislation is fair and popular and is bound to come sooner or later, let's take the affirmative stand and get credit for fair legislation—it would be better to take credit than to have it known that such legislation passed in spite of us.

Let's author bills, not alter them.

CONTRIBUTOR No. 8332

Questions to the Editor

Variation at Drawing

EDITOR TEXTILE INDUSTRIES:

Variation in the weight of drawing has been quite troublesome to us recently. We have taken three weighings from the same head at various times during the day and have found as much as five grains difference in the weight.

The mechanical condition of the frames has been checked thoroughly, and we can find no cause for this; spoons are in good condition and so are the knock-offs. Humidity is controlled as closely as possible. Cards are manually stripped twice each eight hours on a regular schedule.

A 14-oz lap is used to make a 65-grain card sliver. Drafts of 6 on first drawing and approximately 7 on finisher drawing produce a 55-grain finisher drawing sliver.

We have checked our cards and find no mechanical condition to cause this. I have decided that it is caused by stripping some cards at irregular intervals but have never been able to observe this. Also, I have thought that variations in humidity might be the cause of this variation. Possibly some of the readers of your magazine will have some ideas on this. If so, I would like to hear from them.

CONTRIBUTOR No. 8324

Preventing Crooked Seams in Full-Fashioned Hosiery

EDITOR TEXTILE INDUSTRIES:

In our full-fashioned knitting plant we are having considerable trouble with crooked seams down the back of the welt after the stocking has been finished.

We would appreciate any suggestions your readers might have for correcting this condition.

CONTRIBUTOR No. 8328

Through an exchange of ideas in this department, readers can be of valuable assistance to other mill men. Payment is made for letters containing manufacturing information. Names are not used unless permission is given by the contributor.

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the *knee* must be *right*

In Wissco Card Clothing we take special precautions to make certain that the knee, formed by the angle and pitch of the staple, is accurate. Before an order is run off, test samples are checked with a card gauge. When the order is in production, a special instrument maintains an accurate gauge on the degree or pitch of the wire. And the fabricated clothing is checked again before it is precision-ground. Wissco Card and Napper Clothing is the perfect combination of wire and foundation. A test run on the finest soft handling stock will convince you. We'll be happy to send you detailed information.

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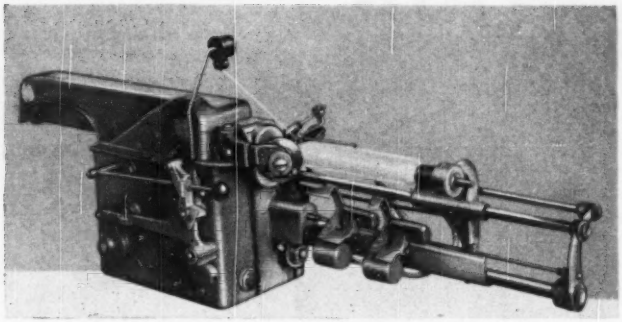


Schweiter Automatic Hollow Cop Winder (Whitin).

Automatic Hollow Cop Winder for Coarse Fibers

A fully automatic high-speed winder for use on jute, hemp, paper, linen, carded wool, cotton, or any other coarse textile fiber is available to mills in the United States and Canada. Designated the Schweiter Automatic Hollow Cop Winder, the equipment eliminates manual starting and doffing operations, and consequent loss of production efficiency of the spindles.

Each spindle is constructed as a separate unit, having all the gearing enclosed in an oil-tight cast iron box. Dimensions of the cop are controlled easily for length, diameter, and traverse. The lengths available run up to 13¾ inches and the diameter up to two inches.

The yarn crossing ratio for each traverse can be easily changed because the change gears for the various crossings are located outside the casing. The crossings available are from 1:1.7 to 1:2.2 or 1:3.28, according to the yarn being run.

The tension is closely controlled by a progressive three-disc-tension mechanism that is easily adjusted by means of a scaled single knob for all three discs.

Other features of this winder are: the feeler-cone for building the cop; right-hand and reverse rotation of spindle, as desired; positive stop motion for each spindle; ball bearing mounted shafts; easily adjustable variable pitch pulleys to give varying spindle speeds for each crossing ratio.

Yarn is taken from cheeses up to a maximum of 9⅞ inches over-end, and the cops are automatically doffed after they are fully wound. The cop formed on this winder has no bobbin, and the yarn is unwound from the inside of the cop where a long protruding end is easily accessible.

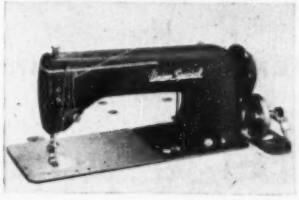
Whitin Machine Works, Whitinsville, Mass.

For additional data, request item J-150, using business reply card on page 210.

Union Special Announces New Lockstitch Machine

Development of a new single needle Lockstitch machine for use in the needle trades has been announced. Designated as Class 61400, the new machine embodies many improvements over previous machines. The feed mechanism has been designed to produce a smooth, symmetrical feed curve that gives even feeding of materials and smooth, flat seams. The new stitch regulating mechanism has a push button control for quick, easy stitch-length adjustment.

Lockstitch machine (Union Special).



The presser bar has been shortened to give a light, yet positive, feeding action. Another improvement is a completely new thread control tension assembly which not only assists in better thread control, but also allows full adjustment from outside the machine.

Hook timing in the new 61400 is responsible for better stitch control and greater freedom and ease in tacking because it is less sensitive to foot lift variations. Tacking is also further improved by other features in the design and thread control. The needle is positioned in the needle bar, eliminating the needle head. This change has permitted a stiffer needle construction, eliminating staggered stitches and resulting in a uniform line of stitching.

Style 61400 A has been designed primarily for use in sewing medium to light weight materials. It is capable of sewing the lightest weight rayon, cotton, and nylon at high speed without cutting or showing feed marks, according to the announcement.

Union Special Machine Co., 407 North Franklin St., Chicago 10, Ill.

For additional data, request item J-105, using business reply card on page 210.

Positive Knock-Off Mechanism for Dye Kettles

A new positive knock-off device for use on piece dye kettles and washers has been developed.

The mechanism has been tested in numerous installations and has proved successful. When installed on a piece dye kettle, an improved adjustable guide rail is connected to the electric knock-off device for shutting the machine off in case of a tie-up. Due to the shape of the pins themselves, a positive knock-off is assured.

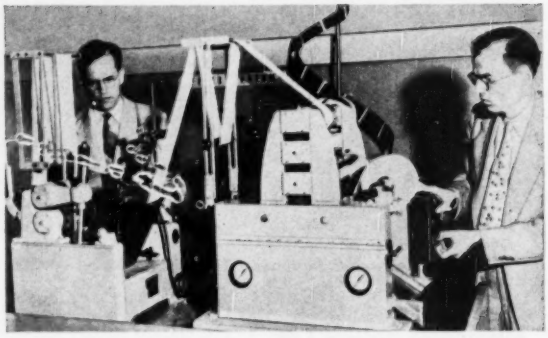
Riggs & Lombard, Inc., Suffolk St., Lowell, Mass.

For additional data, request item J-103, using business reply card on page 210.

Detergency Comparator

A detergency comparator was recently developed for use on detergents for wool. The unit will compare detergents under conditions of high concentration and low bath ratio. It is constructed of stainless steel and has thermostatically controlled, electrically heated outer water bath which

IS METAL PICK-UP RUINING YOUR DYES?



Continuous dyeing unit used in dye research at the Laboratories of Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J. The pad box in the unit at the left is made of Inconel.

Experience has shown that metallic contamination of dyes and processing solutions may cause losses in several ways:

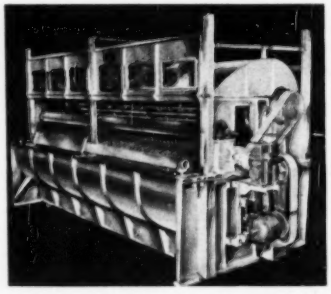
1. *Sensitive dyes may be spoiled by corrosion by-products picked up from piping, vats, and storage tanks.*
2. *In some instances, actual metallic contamination from equipment may cause difficulties in mordanting operations.*
3. *Particles of red rust, carried by solutions, can cause ruinous staining of fabrics.*

The solution to such problems lies, of course, in making processing and storage vessels of materials that are adequately corrosion-resistant.

INCONEL® is such a material . . . extremely resistant to corrosion by most textile dyes, mordants, and dilute bleaches, with high strength and excellent thermal durability.

As long ago as 1932, equipment manufacturers recognized the value of *Inconel* in protecting the color of dyestuffs. Recent laboratory studies made by experts of the Calco Chemical Division, American Cyanamid Company, led them to state: *"We consider Inconel the best material we know of for preventing discoloration or metal pick-up in dyeing."*

In addition to good chemical characteristics, *Inconel* has several important engineering advantages. It surpasses structural steel in strength and hardness. It can be readily welded to form corrosion-resistant seams. And *Inconel* can be bent, formed, machined, brazed, and soldered without special tools or techniques.



As long ago as 1932, equipment manufacturers were using Inconel to guard against corrosion and protect dyestuffs. In this new Rodney Hunt dyeing machine, all parts coming into contact with dyes are made of corrosion-resisting Inconel. The machine was manufactured by the Rodney Hunt Machine Co., Orange, Mass.

To simplify fabrication problems, *Inconel* is produced in a variety of mill forms including structural shapes, seamless tubing, sheet, strip, rod, bar, and fastenings. Also available are *Inconel* valves and pipe fittings.

Write, today, for *"Inconel,* an Alloy for Textile Wet Processing Equipment," which contains helpful information on the applications of *Inconel* in textile dyeing and processing.

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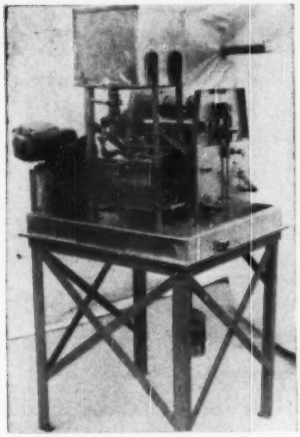
may be circulated by means of an electric pump to insure close control of temperature.

The assembly is essentially a pair of laboratory size dolly washers. The main rolls are 3" dia. x 2" face rubber covered on stainless steel bodies. A stainless steel front roll is furnished with adjustable spacer collars for varying widths of cloth samples, and the whole assembly may be easily removed from the machine.

Brackets between the front roll and the main rolls hold poteyes of various sizes, and they are removable also. The pressure to the main rolls is applied by means of weights suspended beneath the table, and these weights are centralized and can be adjusted for equal loads on each pair of rolls.

A stainless steel suds box is provided in each of the two separate



Detergency comparator (Riggs & Lombard).

testing tanks, and these are provided with tilting type drain which will allow the accumulated liquor to be returned to the testing tank or be drained to the waste line. Swivel type tilting drains in each tank provide means of keeping the liquor at a predetermined level as well as serving for a main tub drain.

At the back of the unit there is a stainless steel water box for washing the samples. The outlets from this tank to the two testing tubs are equipped with pipes to insure uniform feeding to both tubs. The flow of water is regulated separately to each of the tubs by means of adjustable orifices in the pipe line. The entire machine

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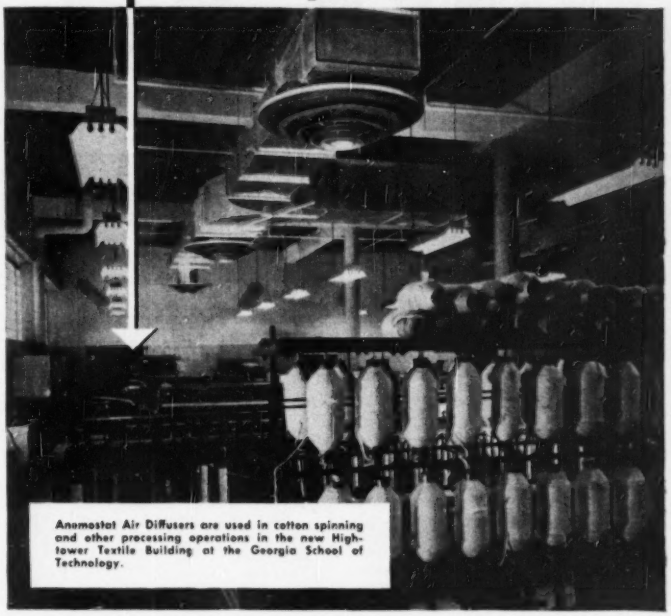

Anemostat Air Diffusers are used in cotton spinning and other processing operations in the new High-tower Textile Building at the Georgia School of Technology.

Scientifically designed Anemostat Air Diffusers accomplish this by distributing any volume of cooled or heated air in predetermined patterns . . . *without drafts.* Anemostats equalize temperature within the occupancy zone to plus or minus one degree and equalize relative humidity as well.

You can also use Anemostat Air Diffusers for spot cooling to neutralize machine heat loads. They are adaptable, too, to zone control of special areas. Anemostat's wide range of designs—including adjustable diffusers—assure flexible and perfectly balanced installations.

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is mounted on a stainless steel table.

Riggs & Lombard, Inc., Suffolk St., Lowell, Mass.

For additional data, request item J-101, using business reply card on page 210.

Graphite Remover

A graphite remover that does a complete job of removing graphite deposited on nylon in the loom is available for lace manufacturers and processors. The product reverses the electrical charge of the carbon and at the same time washes it free. It is supplied in high and low viscosities to suit varying types of lace washing machinery and is poured onto the lace in the washer, using just enough to saturate the lace. The machine is allowed to run for ½-hour with light pressure on the squeeze rolls; then the graphite remover is gradually diluted with water over a ten-minute period to rinse free.

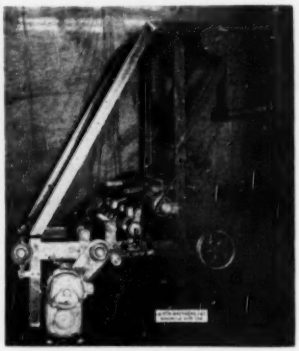
Atlantic Chemical Co., Inc., Centredale, R. I.

For additional data, request item J-108, using business reply card on page 210.

Extracting Machine has Adjustable Slot Vacuum Box

A vacuum extracting machine equipped with patented adjustable slot vacuum extracting box is fitted with automatic ring type slot seals. The machine is built in all widths and is composed of a pair of substantial side frames on which are mounted the tension rails, guide rolls, spiral roll for removing wrinkles, the vacuum extractor, draw rolls, and a folder. This new machine is fitted to handle cloth from a roll to a roll for those who wish to handle their fabrics in this manner.

The drive is by a motor through a variable speed unit so that the machine may be operated at the speed best suited for the type of fabric being run. Speeds are up to 80 yards per minute on rayons and blends; on cottons up to 100 ypm; on woolens and worsteds, from 35 to 45 ypm.



Vacuum extractor (Birch Brothers).

Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

For additional data, request item J-125, using business reply card on page 210.

Electronic Guide for Fabric Edge Control

Automatic edge guidance for fast or slow moving materials is provided by a compact dual-beam transmitted-light electronic system called "Linar"

REDUCE "ENDS-DOWN"—CUT COSTS

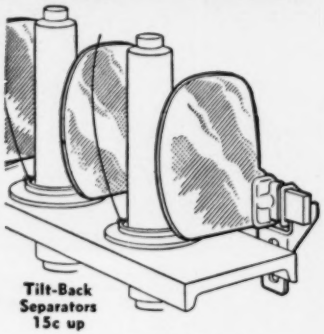
WITH

WHITEHEAD

Permalite

ALUMINUM ALLOY SEPARATOR SHIELDS

Why burden your frames—and your overhead—with heavy, old-fashioned iron separator shields? Whitehead Permalite Shields are made of a special aluminum alloy—strong as steel but many times lighter. They mount right on the ring rail and can be flipped back for doffing . . . And with all their superiority, they cost no more!



Tilt-Back Separators 15c up

Stainless Steel Available for Rayon Spinning

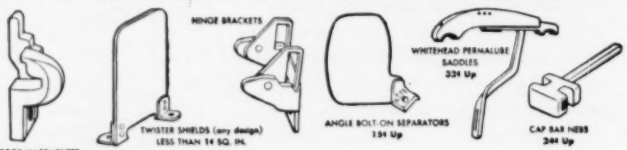
EASY TO INSTALL Simply drill and tap ring rail. We supply the shields and bar drilled to your gauge and ring count, together with proper support hangers and all screws and washers.

EACH JOB ENGINEERED When ordering specify rail width, thickness of back flange, gauge and number of rings in each rail on one side only, as 24-22-22-22-24.

ONLY WHITEHEAD PERMALITE SHIELDS OFFER THESE ADVANTAGES

- Fewer ends down: some mills report 27% less
- Use of lighter travelers which reduce power costs, wear of rings and travelers
- Solid polished blades (not slotted) which cause less wear on yarn, collect less lint and fly, resulting in smoother yarn
- Less vibration, wear of cams, worm gears and lifter-rod bearings
- Reduction of live weight—from as much as 300 lbs in old slotted steel shield assemblies to as little as 35 lbs per frame
- No attention after installation

OVER 4,000,000 IN USE BY MORE THAN 350 AMERICAN MILLS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WHITEHEAD PERMALUBE SADDLES 33¢ Up
TWISTER SHIELDS (any design) LESS THAN 14 SQ. IN.
ANGLE BOLT-ON SEPARATORS 13¢ Up
CAP BAR HEDS 24¢ Up

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speed textile processing

IGEPONS
are used in every phase of textile wet processing:
Scouring
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Degumming
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IGEPONS are the ideal scouring, wetting-out, penetrating and level dyeing agents for all fibers and fabrics.

IGEPONS are stable in acid and alkaline solutions—have excellent detergent properties—rinse rapidly—disperse lime soap and are equally effective in hard or soft water at any temperature.

IGEPONS have high efficiency in low concentrations and save time and labor.

Our nearest office will be glad to furnish samples and technical information. Your inquiries will receive careful and prompt attention.

OTHER GDC PRODUCTS:

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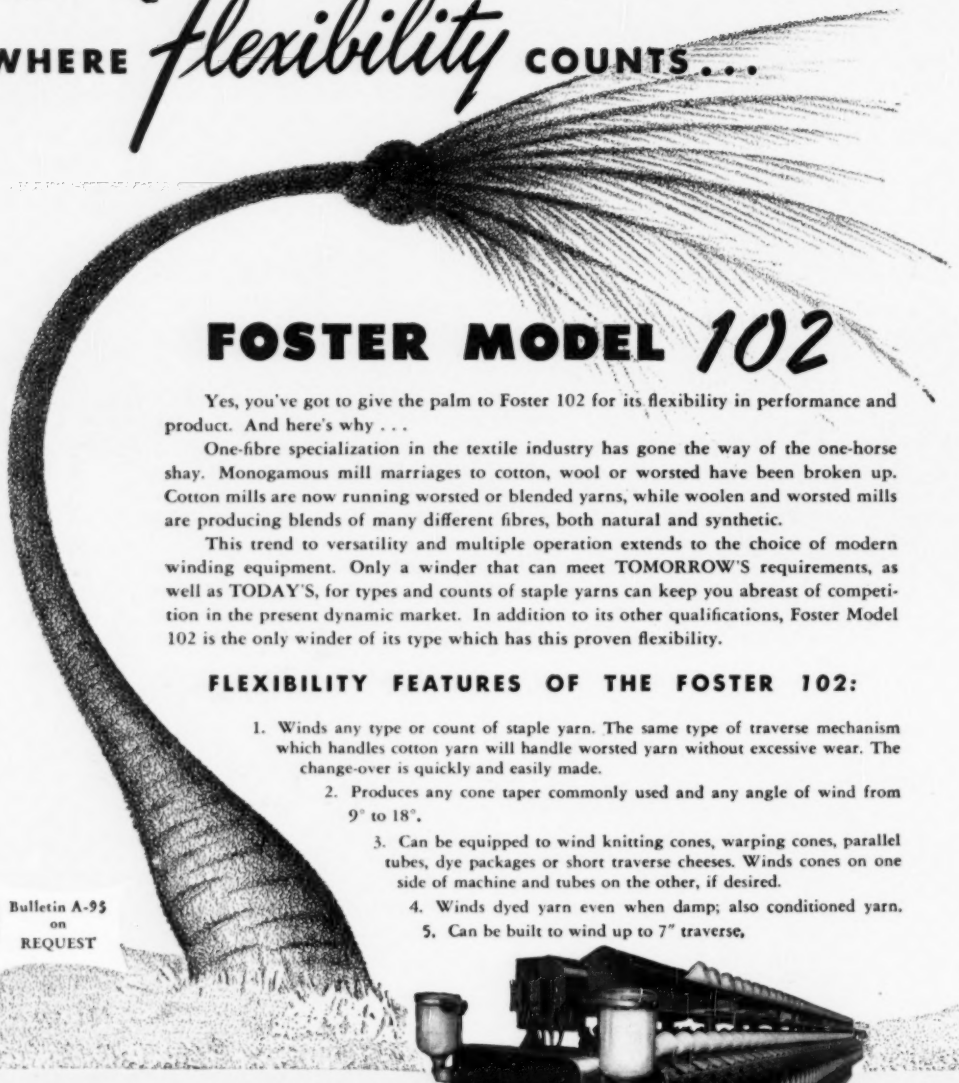
WHERE *Flexibility* COUNTS . . .



FOSTER MODEL *102*

Yes, you've got to give the palm to Foster 102 for its flexibility in performance and product. And here's why . . .

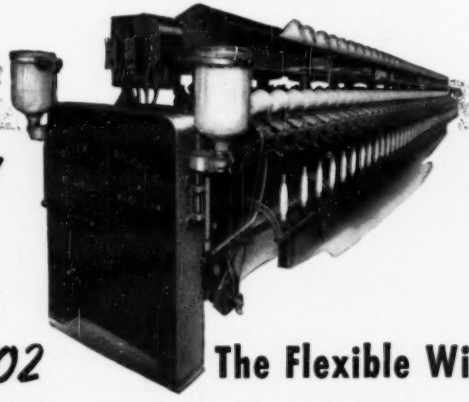
One-fibre specialization in the textile industry has gone the way of the one-horse shay. Monogamous mill marriages to cotton, wool or worsted have been broken up. Cotton mills are now running worsted or blended yarns, while woolen and worsted mills are producing blends of many different fibres, both natural and synthetic.

This trend to versatility and multiple operation extends to the choice of modern winding equipment. Only a winder that can meet TOMORROW'S requirements, as well as TODAY'S, for types and counts of staple yarns can keep you abreast of competition in the present dynamic market. In addition to its other qualifications, Foster Model 102 is the only winder of its type which has this proven flexibility.

FLEXIBILITY FEATURES OF THE FOSTER 102:

1. Winds any type or count of staple yarn. The same type of traverse mechanism which handles cotton yarn will handle worsted yarn without excessive wear. The change-over is quickly and easily made.
2. Produces any cone taper commonly used and any angle of wind from 9° to 18°.
3. Can be equipped to wind knitting cones, warping cones, parallel tubes, dye packages or short traverse cheeses. Winds cones on one side of machine and tubes on the other, if desired.
4. Winds dyed yarn even when damp; also conditioned yarn.
5. Can be built to wind up to 7" traverse.

Bulletin A-95 on REQUEST



FOSTER MACHINE COMPANY
Westfield, Massachusetts

Southern office, Johnston Bldg., Charlotte, N. C., Canadian Representative, Ross Whitehead & Co., Ltd., University Tower Bldg., 660 St. Catherine St., W., Montreal, Que., European Representative, Muschamp Taylor Ltd., Manchester, England.

FOSTER MODEL *102* **The Flexible Winder**

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN NYLON OR RAYON YARNS

Edgetrol.

Interesting features are new swivel correction-range adjustment eliminating all mechanical parts; aircraft type vibration proof mounts; unit contained amplifiers permitting operation of sensing head at any distance from control station without the necessity for coaxial wiring; manual push-button station; automatic cut-in circuits; and fail-safe operation.

Electronic guide (Airlectron).

The cast aluminum sensing head is designed for mounting in restricted spaces, measuring only 3½ x 4 x 8 inches. Main control station is compact and may be mounted at any desired distance from control point; handles up to three hp or any electro-hydraulic system.

Airlectron, Inc., Caldwell. N. J.

For additional data, request item J-102, using business reply card on page 210.

New Textile Books

Fabric Defects, by J. B. Goldberg, is a new book for the skilled technician, millman, dyer, or finisher who wants a better understanding of fabric imperfections. The book is a practical guide and contains actual case histories of defects in textile materials, with some explanation of the contributing factors and suggestions for analyses. Imperfections in woven cotton and rayon fabrics are emphasized. Price, $6.00. Available from McGraw-Hill Book Co., New York, N. Y.

The Whitin Machine Works Since 1831, by Thomas R. Navin, is an enlightening study in the history of a little-known part of American business. This book covers activities of Whitin Machine Works from its inception to the present year. The author dwells also upon the economic conditions affecting industry throughout the period. Available from the Harvard University Press, Cambridge, 38, Mass. Price $6.50.

Loom Box Changing Motions, by W. Middlebrook, is a new book for overseers, students, and others interested in practical weaving. Available from Emmott & Co., Ltd., 31 King Street West, Manchester 3, England.

Improved Pigmented Polymer Latices

Glyceryl (Mono) Ricinoleate S gives good results with organic pigments in polymer latices, according to

Darnell Double Ball-Bearing Casters and E-Z-Roll wheels reduce floor wear to a minimum, lengthen the life of equipment and increase the efficiency of employees—Write for 192 page Darnell Caster and Wheel Manual.
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–of a Kidde Dry Chemical Fire Extinguisher

Pound for pound, *Kidde* Dry Chemical Fire Extinguishers give you more *protection* against textile fires and blazes in flammable liquids or live electrical equipment.

Proof? Factory Mutual Laboratories requires a 20 lb. dry chemical fire extinguisher, in the hands of an experienced operator, to effectively cover 25 square feet of burning area. *The Kidde 20 pounder covered 36 square feet . . . a 44% margin of safety!* And—the tests require a 30 pounder to cover 35 square feet . . . *but Kidde's Dry Chemical extinguisher reached out 48 square feet!*

Why is Kidde better? A special Diffuser Horn applies heat-absorbing, fire-smothering dry chemical in an effective cloudlike pattern that blankets the danger area, helps eliminate splashing of burning liquids, and protects the operator from heat.

Ruggedly built, simply constructed, quick to recharge and equipped with easy-to-operate Trigger Finger Control, *Kidde* Dry Chemical Extinguishers mean sure death to fire—and extra safety for you.

Kidde Dry Chemical Extinguishers can be used in normal standing position, just pick unit up, point the horn, pull the trigger.

Streamlined diffuser horn gives better discharge pattern, means greater coverage, insulating blanket for the operator.

Kidde

Walter Kidde & Company, Inc., 1090 Main Street, Belleville 9, N. J.
In Canada: Walter Kidde & Company, Ltd., Montreal, P. Q.

an announcement by the manufacturer. Glyceryl (Mono) Ricinoleate S is used as a wetting and penetrating agent so that the colors on fabrics are more uniform and have greater covering power. It does not cause thickening of the dispersion and is compatible with latices and plasticizers and tends to act as a stabilizer in these products.

Glyco Products Co., Inc., 26 Court St., Brooklyn 2, N. Y.

For additional data, request item J-106, using business reply card on page 210.

Urea-Formaldehyde Solution for Shrinkage Control

A polymerized urea-formaldehyde solution recently developed for use in producing durable finishes and for shrinkage control effects is designated Synthrez B. The solution is a clear, thin liquid, readily soluble in water in all proportions. Carefully controlled polymerization makes possible the production of shrinkage controlled finishes without excessive stiffening of the fabric.

Synthron, Inc., Ashton, R. I.

For additional data, request item J-104, using business reply card on page 210.

Piece Carbonizing Assistants

Two new foaming and non-foaming carbonizing assistants help materially to increase the speed and the thoroughness of piece carbonizing, according to an announcement.

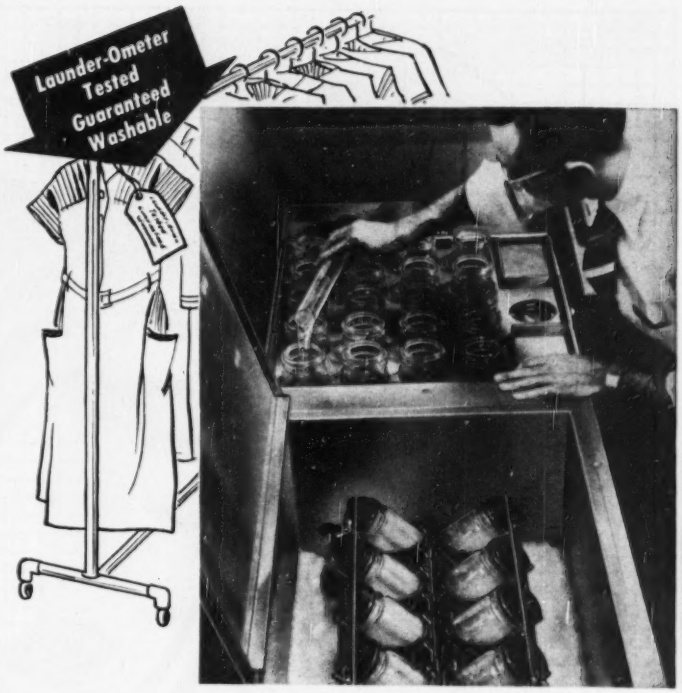
These products, designated Carbowet B and Carbowet BF, have high wetting and penetrating speeds in carbonizing solutions. Tests on wool containing high percentages of vegetable matter, including shives and burrs, have proved very successful. Actual plant runs indicate faster penetration of sulphuric acid into the vegetable matter and a definite increase in carbonizing efficiency coupled with a notable decrease in the time necessary to accomplish the dry milling operation.

Atlantic Chemical Co., Inc., Centredale, Rhode Island.

For additional data, request item J-107, using business reply card on page 210.

Flat Brushes Chemical Resistant

A preservative and method of treatment that protects flat brushes



The Test Behind The *Guarantee*

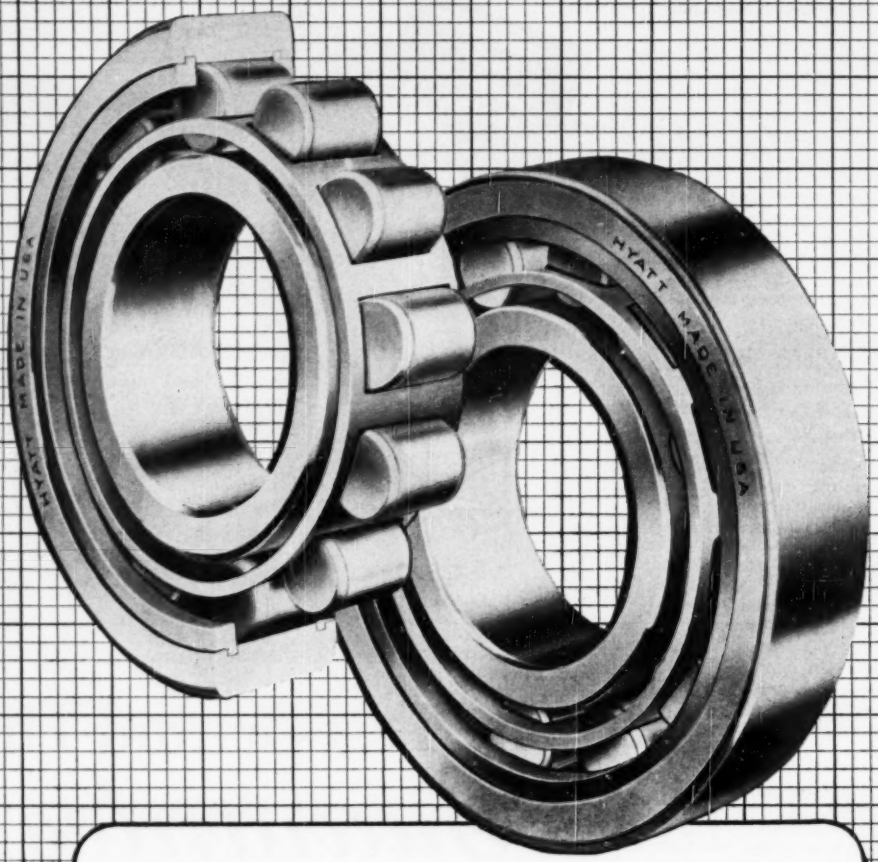
Before you can guarantee a product, you have to know how it will react to conditions it is expected to meet during its service life. Moreover, when you want this information, you want it fast!

When it comes to washable fabrics (or any other washable product) the Launder-Ometer is the machine that can give you the facts—in a fraction of the time normally required. Accepted as the standard laboratory washing machine of the American Association of Textile Chemists and Colorists, the Launder-Ometer can duplicate the effects of as many as 5 commercial launderings in one forty-five minute test. The data thus provided includes loss of tensile strength, color fastness, resistance to shrinkage, bleeding, washing and mechanical action, and other equally important information.

The Launder-Ometer is also in widespread use for the laboratory dyeing of leathers and textiles and for the testing of dry-cleaning oils and solvents and the efficiency of detergents and soaps. As many as 20 samples can be conducted simultaneously and conditions used for any given test can be reproduced at any time.

Operation of the Launder-Ometer is simple. It is a carefully built machine, soundly constructed, and economical in maintenance and operating costs. Available in 3 sizes with capacities of 20 one pint jars, 20 one quart jars, or 6 two quart jars plus any combination of 10 one pint jars or 10 one quart jars. All models are electrically driven, ¼ HP to ½ HP.

ATLAS ELECTRIC DEVICES COMPANY
361 West Superior St., Chicago 10, Ill.
Manufacturers of accelerated testing devices for more than a quarter of a century
WEATHER-OMETERS • FADE-OMETERS • LAUNDER-OMETERS



HYATTS—to your advantage

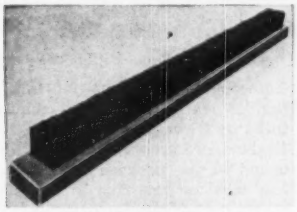
Leading manufacturers of textile machinery design Hyatt Roller Bearings into their new machinery as they have done for many years past.

The makers want the buyers to get the maximum efficiency from these machines, with the care-free feeling that Hyatts are in there doing a good job—minimizing friction—reducing power consumption . . . helping each machine to turn out better products at less cost.

As a mill operator it is to your advantage to look for Hyatts or be sure to specify them for all your equipment. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

from chemicals lengthens life of the brushes four times. This chemical treatment is called "Lifewood," and it has a toxic effect on fungi and termites and resists stain, thereby eliminating destruction through wood decay or rot. By fully penetrating



Chemical resistant brush (M. W. Jenkins)

the wood, filling and sealing the porous cells, the wood repels water, resists leaching. After treatment, the brush is neither injurious to the handler nor to the product and has no objectionable odor. The process is highly non-corrosive to metals, has maximum resistance to volatilization, and doesn't discolor wood unfavorably.

M. W. Jenkins' Sons, Inc., Cedar Grove, Essex County, N. J. (J-250).

Enzymatic Desizer Stable at High Temperatures

A new enzymatic desizer that meets demands for high speed continuous operation can be safely used at working temperatures up to 190 F without fear of destroying the enzyme. No addition of chemicals is required to control the pH or to activate the enzyme.

Royce Chemical Co., Carlton Hill, N. J. (J-190).

New Series of Industrial Casters

"Cold Forged" industrial casters are now available in four wheel sizes in both swivel and rigid types. Designated Series 41 and 42 models, these casters are designed for use on live skids, assembly stands, parts trucks, heavy machinery, and portable equipment.

The Rapids-Standard Co., Inc., Grand Rapids 2, Mich. (J-252).

Aluminum Dry Chemical Fire Extinguisher

An improved dry chemical fire extinguisher employs a high tensile strength aluminum alloy which makes the unit unusually light and easy to

Because they're years ahead in steam generation . . .

only

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STEAM GENERATORS

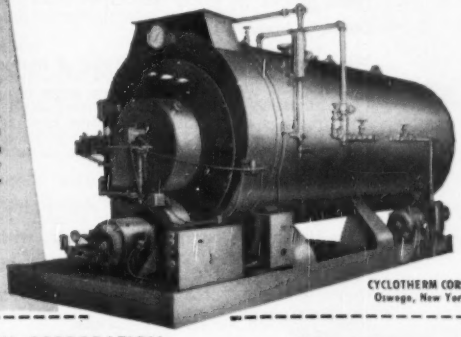
HAVE the REAL ANSWER TO Low GAS and OIL CONSUMPTION

✻ **WHAT IS IT?** It's the modern scientific discovery of transferring heat at the highest degree of efficiency with a new low in fuel consumption. Principal factors of which are the cylinderized solid flame with its exclusive cyclomotion power, designed to utilize the full potential of every particle of fuel . . . and the thin layer of air resulting from centrifugal force that's always between the flame and wall of combustion chamber. A combination to produce steam far in excess of conventional standards for measured heating surfaces.

SEND FOR ALL THE BIG REASONS

Learn how the completely automatic Cyclotherm with its unexcelled all-in-one package type features wipe out waste and excess costs. If you are planning a new or replacement boiler installation it will pay you to first get the facts on Cyclotherm. The coupon below is for your convenience.

SIZES available to fit your steam or water load for processing or heating. Low pressure to 200 psi fired with light or heavy oil, gas or combinations.



CYCLOTHERM CORP. Oswego, New York

CYCLOTHERM CORPORATION
OSWEGO, N. Y.

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Gentlemen: Please send me bulletin P-1 showing the advantages of Cyclotherm's new concept in Heat Transfer. Without obligation, of course.

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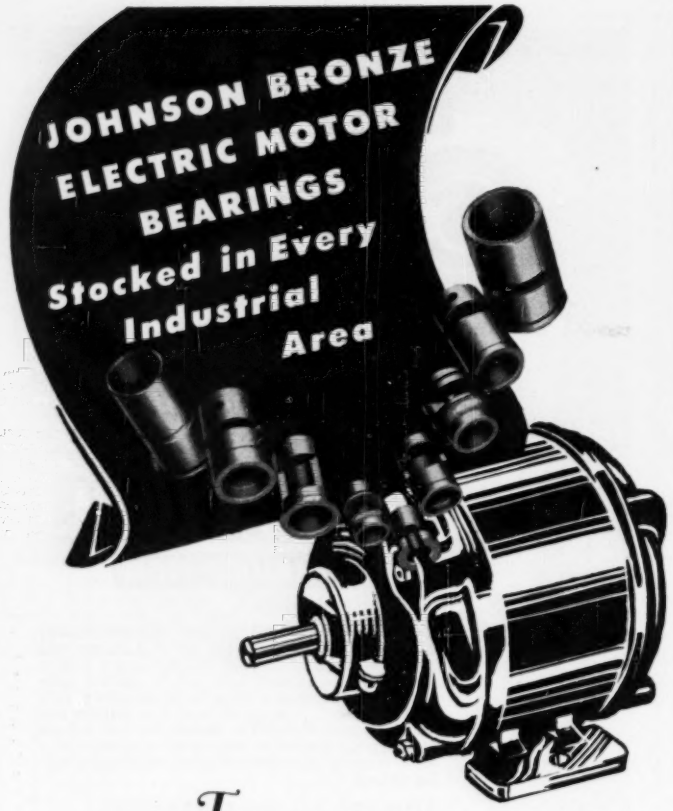

THIS IS THE MOST COMPLETE motor bearing service on the market. Over 300 different bearings . . . for specific motors . . . are immediately available from stocks in every principal industrial city from coast to coast.

Exhaustive studies of each type of motor were made and leading motor repair shops were consulted. From this mass of information Johnson Bronze determined the correct alloy, the correct design and the correct tolerances for each individual bearing. Every Johnson Bronze Bearing is ready for immediate installation . . . completely finished, with flanges, oil holes, grooves, and slots, exactly to the requirements of your motors. For prompt delivery, call your local Johnson Bronze warehouse.

Write for New Catalog

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
530 SOUTH MILL STREET • NEW CASTLE, PA.

handle. It provides high or low pressure as needed and will quickly extinguish fires without danger to the operator or damage to unburned material of any kind.

International Chemical Extinguisher Corp., 295 Hayden St., N. W., Atlanta, Ga. (J-342).

Machinery Lubrication Charts

Recommendations for the lubrication of textile machinery manufactured by Tweedales & Smalley, Ltd., England, are presented in chart form, bound in one package with convenient tabs for referring to individual charts for various departments. The information includes schedules and recommended lubricants of different brands for preparatory departments through spinning and twisting.

Atkinson, Haserick & Co., 211 Congress St., Boston 6, Mass.

Air Operated Control Valve

An air operated control valve for regulating flow of steam, water, oil, or gases has diaphragm operated for pressure differentials below 75 psi. Available in sizes ½" through 2"; standard valve, and packless valve body, the new valve is designated Metaflow.

The Powers Regulator Co., Greenview Avenue, Chicago 14, Ill. (J-253).

Bare Wire Thermocouple Gland

A bare wire thermocouple gland is designed to provide accuracy and quick response without the leakage and expense sometimes associated with this method of temperature measurement and control of gases, vapors, and liquids in a closed vessel under positive or negative pressures. Rapid interchangeability of all parts of this gland permits the use of any thermocouple wire as needed to meet various requirements.

Conox Sales Co., Inc., Kenmore 17, N. Y. (J-251).

Liquid Sealer for Concrete Floors

A concrete floor "casehardener" called Flintcrust Liquid is now available and eliminates the need for any mixing operation. The material requires no more labor or skill to apply than does swabbing a floor with

water. Flintcrust Liquid makes the concrete surface up to ten times harder, increasing the resistance to traffic abrasion, according to the manufacturer.

Flexrock Company, Filbert & Cuthbert, West of 36th, Philadelphia 4, Pa. (J-201).

Wheel Cut-Off On Pipe Machines

A choice of either wheel and roller cut-off or knife cut-off is available on a 2" power pipe machine which is designated No. 999 Super Model. With the new wheel cut-off, the cutter head is equipped with two rollers and one cutter wheel which is self-centering and easily fed with hand wheel. This device cuts off pipe rapidly, leaving a clean cut, and is simple in design with few moving parts. Motor is full ½ hp heavy duty.

Toledo Pipe Threading Machine Co., Toledo, Ohio. (J-202).

Pallet Tiering Method Uses Present Pallets

Wood pallets being used in many plants can be quickly adapted for tiering by the use of several additional parts known as the Palteam. The additional parts consist of a pair of tiering horses which may be assembled to any standard three-stringer wood pallet. Four one-piece socket assemblies are permanently secured near the corners of the pallet with three lag screws for each assembly. Posts of the required length fit into the sockets, and two cross bars fit over the top of the posts.

The Paltier Corp., 53 West Jackson Blvd., Chicago 4, Ill. (J-203).

Centrifugal Clutch for Light Duty

A centrifugal clutch, adaptable for both electric motors and internal combustion engines of one-half hp to six hp, is now in production. The clutch is light in weight, simple in operation, and may be furnished for either direct or indirect drive.

Armstrong Products Co., Milwaukee, Wis. (J-204).

High Efficiency Fluorescent Lighting Units

"Magna-Flo" fluorescent lighting units with "Springlox" lampholders, especially designed for high-efficiency T-12 Slimline lamps, are now available. The "Magna-Flo" systems are

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As Production Engineers we specialize in the utilization of
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ASK FOR OUR LIST OF SATISFIED CLIENTS—IT READS LIKE THE BLUE BOOK OF AMERICAN MANUFACTURE.

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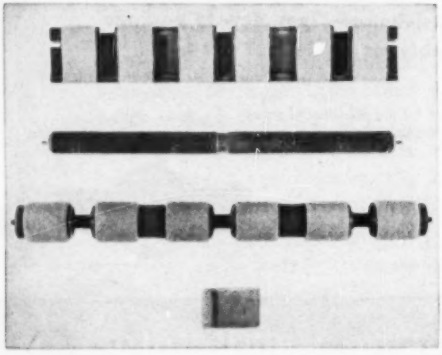
EVERY CUSTOMER A SATISFIED ONE



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PLUSH SCAVENGER ROLL — True and uniformly round surfaces

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available for 96", 72", and 48" lamps with two or three-lamp lampholders and for mounting as continuous line-lighting or individual units.

Benjamin Electric Mfg. Co., Des Plaines, Ill. (J-205).

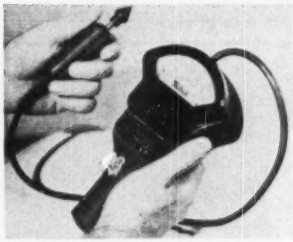
Portable Nailer

A new foot-operated portable nailer is automatically fed and does jobs five times faster than is possible with manual nailing. The machine drives through light metal, prestwood, into hard or soft wood. The driving mechanism is precision built of tool steel for extra heavy duty jobs.

The Heller Co., 2151 Superior Ave., Cleveland 14, Ohio. (J-206).

Electric Hand Tachometer has New Speed Ranges

A hand tachometer, designated Type 25D, now has new speed measuring ranges; 100-1000, 200-2000, and 500-5000 rpm and fpm; and 10-100, 20-200, 50-500 fpm. These new ranges are suitable (without range



Electric tachometer (Metron).

extending adapters) for speeds encountered in motor and generator testing, process control, and maintenance work. Range extending adapters are available to measure speeds as low as 20 rpm and as high as 50,000 rpm for special applications.

Metron Instrument Co., 432 Lincoln St., Denver 9, Colorado. (J-207).

Intercom has Unit Construction

An intercom Master station with unit construction features is designed to permit servicemen to replace the amplifier or selector switches, and then re-assemble the entire unit in only six minutes. By removing six screws, either the amplifier or selector may be replaced. Since the amplifier plugs into the chassis, no soldering of connections is necessary. A

Install the Walton SYSTEM

FOR Spot, Booster OR Complete Automatic Humidification

Requires simple electrical and water supply connections, provides most effective controlled distribution of humidity, needs far less maintenance, skill, time or expense.

Install WALTON for every humidification need. For spot, booster or automatic, zone-controlled systems WALTON offers dependable, economical performance featuring simplicity and ease of installation. WALTON Systems require no floor space—can be installed anywhere without loss of production time. Adaptable to areas with either high or low ceilings, WALTON Systems can be easily removed to new locations, quickly, at a minimum of cost. Investigate the many exclusive advantages offered by the WALTON Unit Humidification System—you'll agree it's the one practical choice.

NEW free booklet GIVES ALL THE FACTS

This informative illustrated catalog describes the many advantages of WALTON Humidifier Systems for the textile industry — included are many typical installations. Copies are available now — MAIL COUPON TODAY.

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IRVINGTON, NEW JERSEY

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Mobile 10 ft. span or 6 ft. span scaffolds, adjustable to desired height, take only 1 minute to erect. Superintendents and master mechanics report that *SAVINGS ON EVEN SINGLE INSTALLATIONS OR MAINTENANCE JOBS MORE THAN PAY FOR UP-RIGHT SCAFFOLDS!*

Use this most modern means for work on ceilings, ducts, overhead machinery, sprinkler systems and lighting fixtures. Stronger than structural steel yet one-third the weight. No wrenches, wing nuts, bolts or loose parts.

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Sales Offices: Atlanta, Boston, New York and Other Principal Cities • Factories: Berkeley, Calif. and Teterboro, N. J.

13,200,000 FEET OF *HOLT* MAPLE FLOORING!

HAVE GONE INTO TEXTILE MILLS THROUGHOUT THE COUNTRY SINCE 1920—WITH COMPLETE SATISFACTION TO THE MILL OPERATORS.

When you think of floors, remember to specify Holt Flooring, made from Northern Wisconsin-Michigan Hard Maple.

HOLT HARDWOOD COMPANY., OCONTO, WISCONSIN

user who chooses to start with an inexpensive two station system can now expand it economically at a later time by simply removing the selector switch and replacing it with a seven or eleven station "Expansion Kit."

Executone, Inc., 415 Lexington Ave., New York 17, N. Y. (J-208).

Simple Chuck for Threading Short Nipples

A new nipple chuck for threading short nipples is of simple design and fits any threading machine or vise, according to the manufacturer. Nipples to be threaded are screwed in by hand, and after threading they are released instantly by an easy turn of the chuck so they can be unscrewed by hand. Pipe adaptors are made for ¼", ⅜", ½", ¾", 1", 1¼", and 1½" pipe; the nipple chuck itself holds 2" pipe. Adaptor for ⅛" pipe also available. The device is made also for British Standard pipe thread.

The Ridge Tool Co., Elyria, Ohio. (J-209).

Storage Racks Feature Sliding Joints

A storage rack system is available wherein rack units can be moved and erected where and when they are needed. Arc welded rack sections are designed for rapid assembly by means of sliding joints. No bolts are used, hence no tools are required in assembly. The sections are self-nesting.

Lewis-Shepard Products, Inc., 260 Walnut St., Watertown, Mass. (J-213).

Fork Truck Features Hydraulic Adjustment

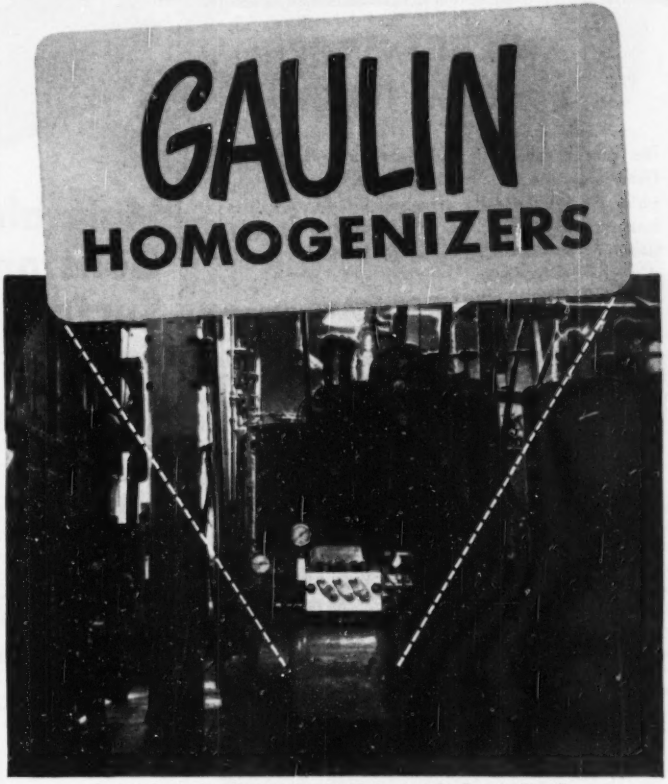
A development which enables the operator of a fork lift truck to quickly and accurately vary the distances between the two forks at any time by means of a conveniently located control lever is now on the market. Hydraulically adjustable forks are primarily designed for fork lift trucks that operate on close time schedules and are required to handle pallets or materials of different widths.

Towmotor Corp., Cleveland, Ohio. (J-214).

Leather Belt Has "Controlled Stretch"

A flat leather belt with "controlled stretch" that prevents permanent elongation of the belt under load has recently been developed. The non-stretching feature of fabric belting and the pulley grip of leather are combined in the belting which is

Mills can Maintain Uniformity of Size Resulting in Improved Slashing and Weaving with



Typical Gaulin Size Homogenizer installation in a leading textile mill.

Installations in numerous textile mills prove Gaulin Size Homogenizers pay for themselves out of savings by producing smoother, better size . . . reducing cooking time . . . lowering heating costs. In addition, homogenized size reduces shedding on slashers and looms.

Precision constructed, Gaulin Homogenizers give years of service with minimum, if any, maintenance cost. Installation is simple . . . can be made over a weekend without production interruption. Write for bulletin and information, today.

Gaulin TRADE MARK

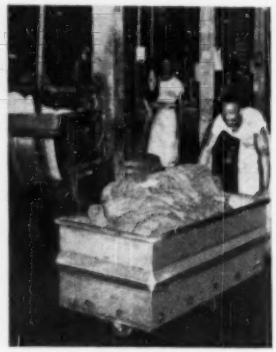
MANTON GAULIN Manufacturing Co., Inc.
51 GARDEN STREET, EVERETT 49, MASSACHUSETTS

FISHER *FUNCTIONAL* TEXTILE TRUCKS

STAINLESS STEEL DYE HOUSE TRUCKS

The unbroken loading and inner surfaces of these Fisher stainless steel trucks protect fine materials; while the scientifically arranged interior provides maximum drainage. The trucks illustrated have been in dye house service longer than a year, and still perform like new.

Mr. Thomas A. Davis, 412 Swift Building, Columbus, Ga., is now associated with Fisher Mfg. Co., in designing and recommending stainless steel Dye House Trucks, Vats, Water Mangles and related equipment.



Smooth inner surface entirely free from bolt heads, rivets, or weldings. Top rim is continuous roll moulding simulating pipe reinforcement. High center bottom provides drainage toward side drain holes. Alloy 18-8-304-2B finish. Other alloys used where needed. Helium Argon welding.

Write, wire, or telephone for information and prices on Textile Trucks for any application.

FISHER MANUFACTURING CO.
MATERIALS HANDLING EQUIPMENT TEXTILE
BOX 244 -- HARTWELL, GEORGIA

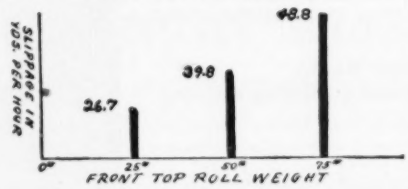
CLIMAX BALL BEARING TOP ROLLS

Equipped with 4 Bearings

Maintain Constant Surface Speed

See how SOLID ROLLS Slip:

RESULTS OF STROBOTAC TESTS



Slippage up to 48.8 yards per hour

This Stroboscopic test showed that solid top rolls do not turn in synchronization with the bottom fluted steel roll, but lag back. The greater the weight, the greater the braking action of the saddle and cap-bar blocks:

Weight	*Slippage lag per hr.*
25 lbs.	26.7 yds.
50 lbs.	39.8 yds.
75 lbs.	48.8 yds.

Not only did the solid rolls slip in the cumulative amount indicated, but it also should be noted that this occurred in a series of jerks, a further undesirable condition.

Tested at the same time, in position next to the solid top rolls, Climax Ball Bearing Top Rolls evidence no slippage, turning steadily and constantly.

When the surface speed of the top roll lags behind that of the fluted roll, production loss results. This loss can be recovered by using Climax Rolls. Their even and constant rotation also means the elimination of the scuffing or rubbing action on the fibers at the roll nip (a factor in the production of uneven yarn and roving), a reduction in the scuffing out of short fibers from the yarn strand, and an increase in the life of the synthetic cots can be realized by the elimination of the constant rubbing action between the fluted roll and the synthetic cot.

WHITIN MACHINE WORKS HAS ADOPTED CLIMAX AS THEIR STANDARD ANTI-FRICTION ROLL. Climax Rolls are available through Whitin Machine Works and all of their agents.

MACHINECRAFT, INC. 21 Vernon Street Whitman, Mass.

Northern Sales:
R. K. BUTLER
Box 428
Whitman, Mass., U. S. A.

Southern Sales:
WATSON & DESMOND
P. O. Box 1954
Charlotte, N. C.

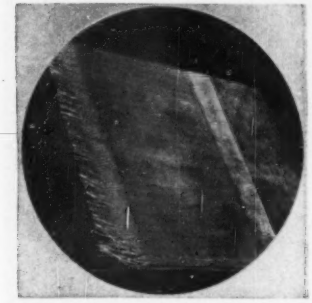
Argentina & Uruguay: Roberto Zander, Representante-Importador, 345 — Juan Jaures — 353 (Suc. 13), Buenos Aires, Argentina.

Brazil:
Eduard Seelig & Cia, Ltd.
Caixa Postal 5904
Sao Paulo, Brazil

Europe:
Mr. S. Gangitano
9 Via Saffi
Milan, Italy

Mexico:
Slobotzky, S. A.
Avenida, Uruguay 85
Mexico, D. F.

called "Cordan." This new leather belting is reinforced with synthetic cords placed between the leather plys by a special process. These cords provide the added resiliency necessary to prevent the leather from stretching beyond a certain point under load



"Controlled Stretch" belting (Sikes).

and to return the belt to its true length when not under load, according to the manufacturer. This eliminates slippage which reduces power loss, belt damaging friction, and frequent shut-down for adjusting or shortening the belt. Available in widths up to 24".

S. R. Sikes Co., 1028 So. Third St., Minneapolis 15, Minn. (J-215).

Metal Sponge for Cleaning Operations

A sponge made of a continuous ribbon of curled Monel is soft and flexible to handle, and its resistance to rust and corrosion and the ease with which it may be cleaned helps prevent the introduction of harmful metallic impurities into equipment where contamination must be avoided, according to the manufacturer. The sponge is designed for use in cleansing applications.

Kleenette Mfg. Co., 1269 W. North Ave., Chicago 22, Ill. (J-216).

Robot Operator For Doors

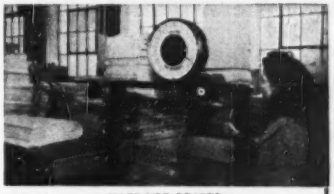
Model SM Robot Operator, for commercial and industrial doors, is equipped with a friction drive and an automatic electrical overload which stops the mechanism completely should an obstruction in the doorway interrupt its normal cycle of operation.

Doors equipped with a Robot Operator can be opened or closed by standard push button controls, or by Robot Magnetic Remote Control from

PRINTWEIGH STOPS ERRORS

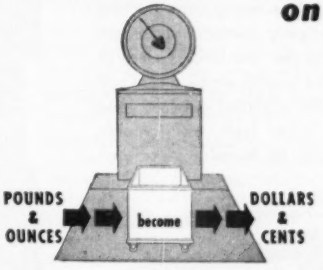
For closer cost control in your textile plant—Toledo Printweigh Scales provide printed weight records . . . assure you that the accurate indication of the Toledo dial will reach your accounting records without chance of human error. Prints big, clear figures . . . on thick tickets . . . on large or small sheets . . . on strips . . . with extra copies. Saves time, stops losses for receiving, production, shipping, stock rooms, and many other textile weighing operations.

PRINTED WEIGHTS



YARDAGE SCALES

MATERIAL becomes MONEY on your SCALES!



Errors made at the scale stay wrong forever. There is no chance to recheck; either the material has been shipped or has lost its identity in the general stock. You've got to be *right*—weigh it right—Toledo Printweigh means *accurate* weights *accurately* recorded! Send for bulletin 2021 on modern weight control. Toledo Scale Company, Toledo 1, Ohio.

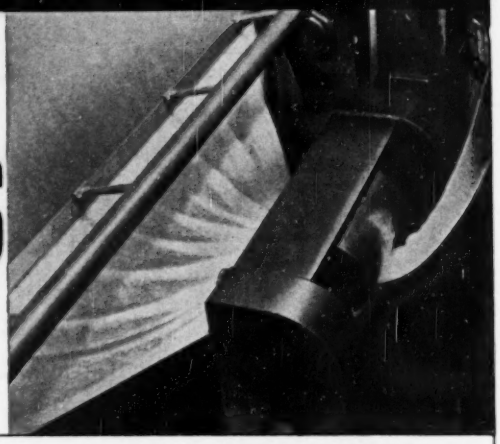
Guard Costs with TOLEDO All the Way

10.000.000 CARDING POINTS NEED PERFECT GRINDING ROLLS

CONSULT THE
CARD-GRINDING SPECIALISTS

DRONSFIELD'S

TRAVERSE WHEEL GRINDER Nº 120



SOLE AGENTS FOR DRONSFIELD'S MACHINERY :-
JOHN HETHERINGTON & SONS INC.
BOSTON · MASS.

SOLID GRINDING ROLLER Nº 112

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

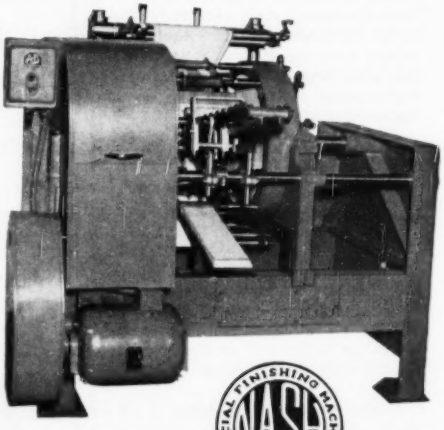
SAVE the Expense of Hand Washing with the No. 89 Nash AUTOMATIC BOBBIN WASHER

Washes flanged bobbins at 28 pieces per minute!

Textile mills throughout the country are finding the Nash No. 89 a time and money saver. It's a ten-spindle machine that does the entire washing and wiping operation automatically from start to finish. Eliminates the time and expense of hand washing. No dirt is left on the bobbin which would soil the yarn on the finished fabric. The cleaning solution used has a 140-degree flash point and is not toxic, assuring safe machine operation. The solution has no harmful effects on yarn, either natural or synthetic.

Write for complete descriptive bulletin

We also manufacture Automatic Bobbin Finishers, Quill Polishers and special-purpose machinery.



J. M. NASH COMPANY

SPECIAL FINISHING MACHINES · NASH · SINCE 1890

DEPT. 89—2368 N. 30TH STREET **MILWAUKEE 10, WISCONSIN**

cars or trucks by the drivers, or by a combination of these controls.

Robot Appliances, Inc., 13165 Prospect Ave., Dearborn, Mich. (J-217).

Selective Speed Gearshift Drive

A new 5 hp, 1200 rpm selective speed gearshift drive has been designated Type R3AC and incorporates both primary and secondary gear reductions. It is designed to individually motorize and drive machines that require a low range of selective operating speeds, combined with high radial load capacity.

Overall dimensions of the Type R3AC, including standard 5" output shaft extension are 31 11/16" in length, 12¼" in height and 18¼" in width, including gearshift lever.

Lima Electric Motor Co., Lima, Ohio. (J-218).

Electrically Operated High Pressure Grease Guns

Two high pressure electric powerguns, of 25-lb and 40-lb capacity are designed for use where air power is not available.

The 25-lb gun, Model 7170-R, will deliver 14 ounces of light or medium lubricant per minute at 70F. The 40-lb gun, Model 7175-R, handles all types of grease, fibrous, heavy, or light. It has helix arm and worm gear priming and delivers 5½ ounces of heavy fibrous lubricant per minute at 70F.

Alemite Division, Stewart-Warner Corp., Chicago, Ill. (J-219).

A-C Motors Improved

Improved motors of the large, bracket-bearing, squirrel-cage induction type now provide more protection and greater accessibility. This type of motor construction is standard for ratings up to 1 hp per rpm; however for steady non-overloading industrial drives (such as centrifugal pumps, blowers, and fans) bracket bearing construction may be used for ratings up to approximately 1.5 hp per rpm for motors in the high speed class up to 900 rpm.

Allis-Chalmers, Milwaukee, Wis. (J-220).

Vaneaxial Ventilating Fans

Two new vaneaxial type, medium pressure, propeller fans are available for industrial ventilating applications. Designed for use with ductwork,

HOW TO GIVE YOUR FLOORS A FUTURE

(Above) Dark oil-soaked floor maintained by scrubbing. (Right) Similar area, same dirt conditions, but TENNANT dry-cleaned.

An example of results you can get with the

TENNANT *System* OF FLOOR MAINTENANCE

To be SURE of bright, easy-to-clean floors in your mill—both now and for *years* to come—no other maintenance method is more effective than the TENNANT SYSTEM.

It not only reconditions dark, spongy, water-softened floors . . . it restores original brilliance . . . hardens, seals and *protects* against dirt and traffic . . . cuts cleaning costs.

KEEPS FLOORS BRIGHT by fast mechanized dry cleaning. Eliminates scrubbing.

MAKES FLOORS EASY TO CLEAN. Dirt cannot readily adhere to smooth-sealed floors. Wipes off easily.

CUTS MAINTENANCE COSTS by saving manhours. Floors clean up like magic and stay clean much longer than when scrubbed. Floors stay dry, hard, lustrous; reduces slip hazards.

G. H. TENNANT CO.
2524 North Second Street
Minneapolis 11, Minn.

Write today!
Get typical case histories, photos, and NEW bulletin "How to Get Better Results in Textile Floor Maintenance."

TENNANT FLOOR MAINTENANCE System

Established 1870

OFFICES IN PRINCIPAL CITIES

2 Great Models
for
TESTING
MOISTURE
CONTENT
in ● Wool
● Cotton
● Rayon and
● Nylon

MODEL PD-1
for textiles in loose or compressible forms—
1" penetration

MODEL K-2
for textiles in cones, rolls, beams and similar forms.

10-DAY FREE TRIAL!

Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

Quick, Accurate Readings

In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.

This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

MOISTURE REGISTER CO.
Dept. H, 1510 W. Chestnut St., Alhambra, Calif.

ELECTRONIC MOISTURE REGISTER
The standard
in moisture testing

vaneaxial fans permit series or straight-through connections for all air-moving requirements. Operating on low horsepower input, the units possess the ability to work quietly over a wide pressure range.

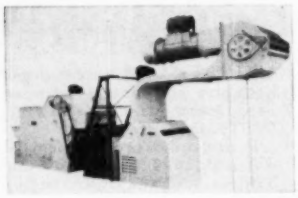
Robbins & Myers, Inc., Springfield 99, Ohio. (J-221).

The Lummus Super-Jet Cleaner

The new Super-Jet cotton cleaner, which has been used following gins, has now been designed for cotton mills. Operating on the principle of air cleaning, the Super-Jet impels the cotton with a blast of high-speed air to force the stock over a curved path. Foreign matter tends to hug the curvature of this path while the lint rides on the top of the air blast.

An adjustable mote knife at the end of the curved plate, over which the cotton and dirt move permits the foreign matter to pass out of the cleaner while the lint remains in it. The separation is effected by applying a suction to the lint flue of the cleaner to provide an almost complete balance of air at the orifice under the mote knife.

The high-speed blast of air which is forcing the lint and the foreign matter to this separation point tends to blow everything through the vent under the mote knife, but by applying a sufficient amount of suction at this vent, the good lint is retained in the lint flue. The heavy motes and other foreign material, together with quantities of loose leaf and neps which are fairly light but still heavier than the lint, will pass out through the cleaning vent.



In adapting the Super-Jet cleaner to cotton mill use, it is necessary to approximate the finely divided condition of the lint as it leaves the gin, and the cleaner would always follow some conventional opening machinery to get the cotton properly prepared for the separation of lint and foreign matter in the new cleaner.

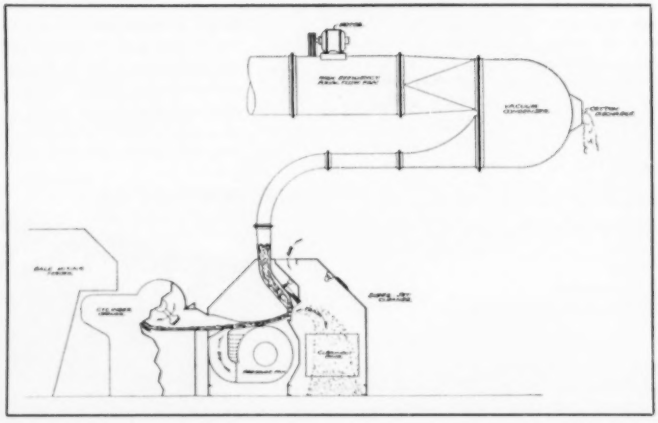
The accompanying drawing of the Super-Jet unit shows a mixing feeder which could receive cotton from a condenser following any kind of typical cotton mill opening system. This feeder delivers to a feed roll type opener equipped with a carding type beater for thoroughly opening the stock for the Super-Jet. The special condenser for developing the high suction required follows the cleaner itself. An arrangement of this type can be used in a mill already having a complete opening system.

Tests made under cotton mill conditions show that the new cleaner has shown remarkable capacity for taking out motey material, neps, and pepper trash after the cotton has been completely processed through conventional opening and cleaning systems, it is said.

The cleaning in the Super-Jet is done solely with air.

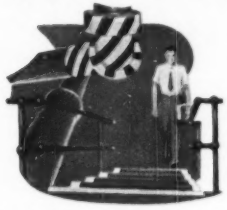
Lummus Cotton Gin Company, Columbus, Ga. Sales agency, Aldrich Machine Works, Greenwood, S. C.

For additional data, request item J-199, using business reply card on page 210.



BETTER SEEING CONDITIONS! Application of Du Pont Color Conditioning in a sewing room at Great Barrington Mfg. Company, Great Barrington, Mass., provides workers with the correct degree of "brightness" within the working area, helps them see better, feel better, work better.

DU PONT COLOR CONDITIONING INCREASES EFFICIENCY!



SAFETY! Colors and symbols of the Du Pont Safety Color Code quickly identify first-aid and fire-protection equipment . . . "paint up" hazardous areas . . . help prevent personal injury.

MORALE! Throughout your buildings . . . in rest rooms, washrooms, offices, corridors, etc., COLOR CONDITIONING imparts an agreeable, efficient atmosphere. Pleasant surroundings give workers a "lift" . . . pay off in better work.

SERVICE! A Du Pont maintenance painting expert is ready to discuss COLOR CONDITIONING with you. He will show you how this scientific painting plan can be applied to your buildings . . . without added cost.

NOW, at no increase over the cost of normal maintenance painting, you can have all of the benefits of scientific Du Pont Color Conditioning for your plant . . . better seeing conditions, increased quantity and quality of output, better employee morale, lowered accident rates!

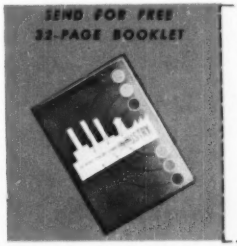
Actually, in the long run, Color Conditioning costs *less* than the old-fashioned system of plant painting. For Color Conditioning utilizes light and color *correctly* to make maintenance painting pay extra dividends. No mere theory, Color Conditioning is being proven daily, in thousands of industrial plants, from textile mills to foundries, in old and new buildings.

Why not let a Du Pont paint salesman tell you the complete Color Conditioning story, and discuss the proper use of durable, pre-tested Color Conditioning Paints, Safety Color Code and Machinery Enamels throughout your building and on your equipment? Simply mail the coupon below.

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . .
THROUGH CHEMISTRY



E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division, Dept. N-911
Wilmington 98, Del.

Please send me, without obligation, your 32-page book, "Color Conditioning for Industry."

Name _____

Title _____

Firm Name _____

Address _____

SERVING THE TEXTILE INDUSTRY SINCE 1899

SONOCO PAPER TUBES

MADE TO *Any Specifications*

. . . for any textile job

Regardless of what the requirements may be—for winding or twisting yarn or carrying fabric—there is a SONOCO paper tube for the job.

SONOCO Tubes and Cores are available in any practical length and wall thickness and with inside and outside diameters of micrometer accuracy.

Spiral or Parallel wound of quality paper, they are manufactured with special surfaces and in various colors. These tubes can also be impregnated, treated, printed, notched, scored or perforated. Each order is made to individual specifications.

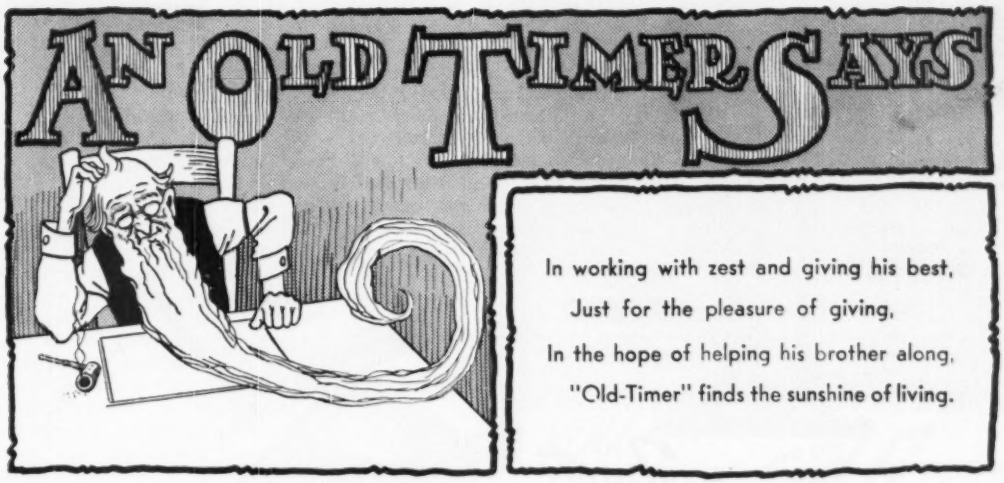
Our technical service department will be glad to work with you in the development of tubes for special jobs.

SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

sonoco — SERVES THE WORLD — PAPER CARRIERS — REG. U.S. PAT. OFF.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Find a Better Way!

(A continuation of the discussion, "Can You Dream?" which began in the February issue.)

There is always a better way.

Wait a minute. How's that? Yea, that is exactly what we intended to say—

There is *always* a better way.

You "gotta" feed a horse hay before he can work.

You "gotta" feed a boiler fuel before it can work.

You "gotta" feed a gas engine gas before it can work.

And you "gotta" feed that brain of yours some knowledge before it can work.

As Mr. Horse is out of the picture we will not discuss him further; but because engineers tell us that less than 15% of coal we put into a boiler is converted into power at the wheel—There must be a better way.

And if our information is correct, for every dollar you put into your gas tank you get, maybe, 30c converted into (BTU's) power —There must be a better way.

That electric light—But why go on and on talking to you about these simple things when you see looms run all day without a stop while a loom right next to it stops ten or fifteen times—and all around you, you see ends on a spinning frame run all day while the end next to it breaks down a dozen times.

Can you challenge OLD-TIMER's statement: *There is always a better way?*

The Length of Your Influence

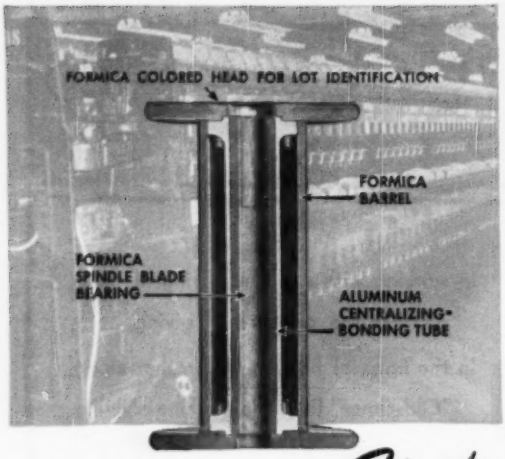
Every individual in your employ represents a length in your chain of influence. The section man with six weavers or spinners or card tenders must or should know each operative intimately—his or her disposition or attitude toward the job, the boss, and the village.

The operating executive who has 100 links in his chain (his operatives) should also know each individual—their attitudes, etc. The superintendent or manager who has 500 or 1000 links in his chain should certainly know the personalities of his key men first —then have a general knowledge of the attitudes of the employees as a whole. If this knowledge is as complete as it should be, his influence should affect each link in his chain in every action he takes in his management. Here is where mass psychology pays off.

Nothing To Do

It is certainly not OLD-TIMER's intention to preach to you. Anyone can tell you that you should do this and that—things which you already know you should do. What we strive to do is to show you *why* you should do so and so —to show you *how* you can accomplish this or that. We hope to prove to you, not just tell you, that you have a brain that is capable of doing a much better job than it is doing if you will just give that brain a little help

A friend once told of an appointment he had with an executive who was the head of a multi-million dollar concern; he was a little nervous when he walked into the office. Seeing this big executive was looking at some papers, my friend suggested he wait until the executive was through: "No, come right in," said the executive. "I have nothing in



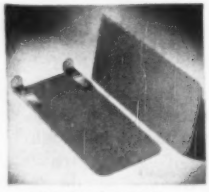
Another Formica First

GYROTEX BOBBINS

For Faster Production . . . Better Quality Yarn . . . Greater Profit

Gyrotex Bobbins are Formica's answer for today's new synthetic fibres. They match the capacity of modern man-made yarns for high-speed production that means greater profit.

A new departure in design, GYROTEX bobbins assure dynamic balance, complete freedom from distortion by heat and moisture, strength to withstand winding strains, light weight and flawless contact surfaces. Heads come in your choice of over 50 different colors for rapid identification. Write today for information on Formica GYROTEX bobbins and other parts for the textile industry. The Formica Co., 4694 Spring Grove Ave., Cincinnati 32, Ohio.



SEPARATOR BLADES . . . made from tough paper base laminated grades, assure highly polished yarn contact surfaces. Furnished with special hardware on order.

SIZING TUBES . . . accurately machined from Formica's paper base rolled tubing. High moisture resistance . . . high compression resistance.

Productive FORMICA at Work in Industry

BIG IN PERFORMANCE . .

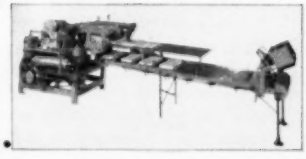
Attractive wrapping of textile products . . . whatever your choice of material . . . is easy and effective when you use the Hayssen Textile Wrapping Machine. FULLY AUTOMATIC . . . it replaces costly hand wrapping. Exact registration of six-sided, printed designs is regulated by the Hayssen Electric Eye. The Hayssen is backed by 40 years of wrapping machine experience . . . and keeps the unit-cost of wrapping at a low level.

Write for full information and technical packaging help. Ask for circular "TI" and name of representative.

HAYSSEN MFG. COMPANY . . SHEBOYGAN, WIS.

Hayssen ELECTRIC EYE WRAPPING MACHINES

IT PAYS TO WRAP THE HAYSSEN WAY



particular to do. My job is to THINK."

There you are, fellows; all OLD-TIMER is trying to do is to get you to use that "thinker" of yours more than you do and to show you how to use it.

Daniel Starch, consultant in business research, tells of an interview he had with Mr. Frederick H. Ecker, head of Metropolitan Life Insurance Company, who finished grammar school but *did not go to college*. Mr. Ecker explained that he got his education *not* by working his way through college but that he "*colleged* his way through work." He went to night schools, he took a law course and studied as he worked. And we suppose you have read that Charles E. Wilson, head of GE, left school at 12, but after going to work he went to night schools, took correspondence courses, etc.

In the face of such facts as these and thousands of other successful business men who have acquired outstanding educations, don't you feel just a little guilty that you are not doing more with your spare time, to enlarge your education. Or do you think your brain is filled up?

I keep six honest serving men
They taught me all I know
Their names are What and Why and When
and How and Where and Who.
—Kipling

Labor Relations

How do you feel about your labor relations? Matters not how smoothly everything is going along, it would be a darn good idea to put Kipling's six men to work and see if you can uncover something you had no idea was there. We believe every overseer, superintendent, and manager should set aside a study period, so to speak, every so often and put Kipling's men to work on this subject and nothing else, until each has been discussed fully.

Here again OLD-TIMER believes an overseer's meeting with his assistant and section men is even more important than the superintendent's meeting with his overseers. Have a list of questions ready for your meeting. The superintendent should help the overseer with the list of questions for his meeting with section men. The superintendent and manager should get together and discuss the questions for their meeting.

If you will ask enough questions you will run into something you did not know. And it is oftentimes the things you dont' know that start something brewing. The man who can and does ask the most intelligent questions is the man who will know the most about the problem. We did not use the word intelligent in the literal sense, in the foregoing statement, because oftentimes a question which is irrevalent or probably sounds foolish, will bring out just what you want to find out. *Then* it is an intelligent question in the sense we mean.

With the most modern machinery, the finest buildings, the best houses and streets, you still

WHEN YOU WANT STEEL LICKETY-SPLIT

GET IT FROM OUR WAREHOUSE DIVISION

ONE OF THE SOUTH'S largest varieties of steel products is within reach of your telephone or over-night mail . . . ready for rapid delivery right to your door.

- *Dixisteel hot rolled bars, strip, angles and equal leg tees, plain or hot-dip galvanized*
- *New billet reinforcing bars*
- *Cold drawn screw stock (suitable for shafting)*
- *Structural angles and channels*
- *Hot rolled plates and sheets*
- *Galvanized sheets and roofing*
- *Union drawn cold finished rounds and squares*
- *Republic "Enduro" stainless steels*
- *Berger metal lath, galvanized and stainless downspouts, gutter and accessories*
- *Rigidized metals*
- *Truscon welded wire mesh*
- *Chase copper cold rolled sheets and strips.*

There are plenty of others. Write for our latest complete list of products and prices.

WAREHOUSE DIVISION
Atlantic Steel Company
ATLANTA, GEORGIA • EMERSON 3451

don't get anywhere without human beings.

Your firm may have unlimited capital to buy modern machinery —build fine buildings and villages —but all the money they have cannot buy human beings. Therefore the paramount job of all operating executives today is centered around Human Relations. Remember years and years ago OLD-TIMER explained to you how he gave a section to a section man? If it was a section of looms it was explained to the section man that he was being put in charge of $40,000 worth of company's money and that it was his responsibility to operate those looms so they would not take an excessive amount of supplies (and here he was shown the record of good section men) and that the weavers were depending upon him for the highest wages they could make, etc., etc. A section of 30 spinning frames was explained in like manner, and a card grinder was reminded that he had charge of more money than any other section man.

Boy, when those men went out of the office to take a section, they certainly felt their importance. They realized they were part of the firm. And, gentlemen, when you can get an operative to feel that he or she is a Part of the Firm, you have done one big day's work.

(*Continued next issue*)

NON-FLUID OIL

TRADE MARK REGISTERED

The Drip-less, Waste-less Loom Lubricant

NON-FLUID OIL has been adopted as the standard loom lubricant by the majority of mills because its use helps them secure greatest output of perfect goods.

NON-FLUID OIL prevents "oil spot" loss from dripping, leaking oil that gets on warps and woven goods . . . and from "cam spatters". By providing dependable lubrication until completely used up, NON-FLUID OIL keeps looms in steady operation . . . increasing production and reducing maintenance cost by out-lasting oil 3 to 5 times.

We are prepared to furnish mills with skilled engineering service. Write for Bulletin T20 and free testing sample of A-#00000 Grade NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.

292 Madison Avenue, New York 17, New York—Works: Newark, N. J.

Southern Dist. Manager: Falls L. Thomason, Charlotte, N. C.
WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Columbus, Ga. — Greensboro, N. C. — Greenville, S. C. —Chicago, Ill.—Detroit, Mich.—Providence, R. I.—St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

U. S. Silk Imports Grow Steadily

Raw silk now is beginning to stage a very belated post-war comeback due to shortages of other fibers, natural and synthetic. More people are handling silk imports and distribution in the U. S., who are really familiar with this material and have a sound notion of its potentialities.

In any event, 1950 imports of raw silk into this country now appear likely to establish a new high record in weight and value, since before World War II.

Retail Turnover To Stay High

Any middleman or retailer who can maintain a workable inventory of finished merchandise seems likely to find plenty of customers from now on. The month-by-month reports on dollar-volume of retail trade will probably show smaller increases (compared with like 1949 months) than in July and August, but the stores will sell a greater aggregate dollar-volume than can be accounted for by the expected rise in disposable consumer income. This partly will be at the expense of a further sacrifice of the public's savings, but also largely by swelling credit buying.

Merchandise executives profess to feel that consumer credit restrictions will not be sufficiently effective to greatly lessen the public's demand for goods. Some of these experts contend there will be adequate supply of necessaries in most lines, at least during balance of this year, and maybe into 1951; but this depends somewhat on the final scope of "defense spending."

Traditionally

THE FINEST...

NEOLANS

BY CIBA

Illustration Courtesy of Abercrombie & Fitch Co.

The time-tested choice for all quality wool fabrics, Neolan Colors are distinguished by their

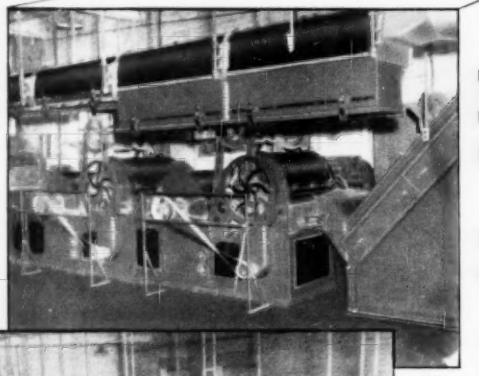
GOOD FASTNESS
LEVEL DYEING
SIMPLE APPLICATION
EASY SHADING

CIBA COMPANY INC.

627 GREENWICH STREET, NEW YORK 14, N. Y.

Boston Providence Chicago San Francisco Charlotte Philadelphia

The Good Things IN A SMALL PACKAGE...



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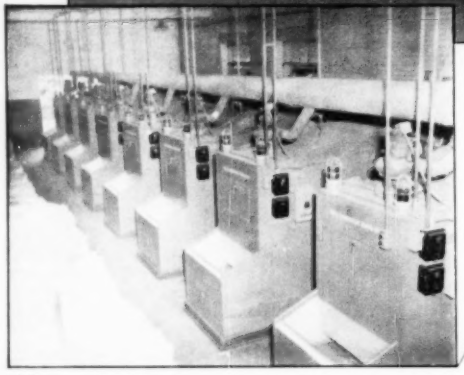


#2.

Modern Opening Room Installation at Plymouth Mfg. Co., Inc., McColl, S. C., showing (#1) H & B 30" Tandem Opening and Cleaning Unit, Superior Cleaner and Rake Conveyer. (#2) H & B Blending Feeders.

H&B
OPENING ROOM EQUIPMENT AT PLYMOUTH MFG. CO.

Laid out in a small area — operating with the maximum in cleaning and opening efficiency.

H & B's compact installation at Plymouth Mfg. Co., Inc., McColl, S. C. is working proof that modern opening room machinery can combine economical space-saving with profitable efficiency.

The "good" things that come in this "small" package are: eight Blending Feeders and one Independent Waste Feeder, an H & B Tandem Opening and Cleaning Unit, a 45° elevator type Superior Cleaner, English Cleaning Trunking and Rake Conveyor.

The Blending Feeders, 35½" wide between the frame sides, contain a spiked elevating apron and a plain slat feed apron. All eight of these and the Waste Feeder have individual motor drive and feed onto a 53' extended feed apron of the Hopper Bale Opener. The Blenders are all-metal and feature sprinkler attachments, tell-tale off-and-on lights and sheet metal closing doors on the hopper.

The H & B 30" Tandem Opening and Cleaning Unit contains 2 Buckley Beaters mounted on anti-friction ball bearings. These smooth running beaters thoroughly open and clean the cotton. The covers are equipped with a beater-locking device for protection of the operator.

After passing over the delivery apron of the Tandem Unit, the cotton feeds directly into a 45° elevator type Superior Cleaner with jumbo magnet, thence through piping and English Trunking back to a condenser and rake conveyer for delivery to 4 H & B One-Process Pickers.

The entire system is automatic. The cotton is not touched from the time it enters the blender until it comes off the picker as a finished lap. At all times the correct flow of opened and cleaned cotton is maintained by modern feed controls actuated by a mercury switch on the pickers.

H&B AMERICAN MACHINE CO.

FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.
Branch Offices: Atlanta, Ga. — 815 Citizens and Southern National Bank Bldg.
Charlotte, N. C. — 1201 Johnston Bldg.
Greenville, S. C. — 1510-11 Woodside Bldg.

Builders of MODERN TEXTILE MACHINERY

Dyeing Wool

(Continued from page 149)

ratio is low. Such a dyebath is only slightly alkaline, free from oxygen; and the glue acts as a leveling and a protecting agent.

The dyeing is carried out for 30 to 45 minutes at 130 F or at 150 F, as the dyes are grouped into two temperature classes. For some of them, the addition of 4% ammonium sulphate towards the end of the dyeing is recommended to assist in exhausting. A rinse in cold water is then given, and where possible the material is squeezed and air oxidized; or in the case of machine dyeing, after the temperature has reached 95 F, a 2% hydrogen peroxide solution is run for 10 minutes. A sour with acetic or sulphuric acid leaves the wool in a more lofty condition and increases the dye fastness; in the case of slubbing (for which the Helindon dyes are especially popular) this can be done at 185 F in the slub box or backwasher.

(To be continued)

Waste Treatment in Textile Plants

Scouring of high grease content wools at Forge Village, Mass., has necessitated the treatment of wastes in order to eliminate the pollution in the discharge stream, according to reports of the New England Industrial Waste Conference, recently held at M. I. T. For this purpose the calcium hypochlorite treatment process was adopted. 200,000 gallons of scouring waste water per week are treated with 6 to 7% by volume of calcium hypochlorite. After thorough mixing and settling, the sludge is drawn off and treated with sulfuric acid to a pH of approximately 4.5 and allowed to settle. The clear liquor is decanted to the stream, and the sludge is heated and pumped to a blowdown tank. It is then forced through Sperry filter presses. The grease that is recovered is sold. The process will pay if the price of degras is about ten cents per

Everyone Admits

"A New Broom Sweeps Clean"

THAT'S ONE REASON WHY IT PAYS TO REPLACE WORN-OUT EXHAUSTERS WITH "Buffalo" EXHAUSTERS

—and what a "cleaning" job these new "Buffalo" Industrial Exhausters can do! They're of welded steel plate for extra years of service. Smooth, *rivet-free* interior surfaces mean extra-efficient gas handling or material conveying. Why not make a check of *your* plant exhausters? Are they doing the job? Or are they siphoning off maintenance and power dollars that could well be saved? Replacement by "Buffalo" can well save you more money than you think.

Write for Your Free Copy of Bulletin 3576 and see the performance and application information on these exhausters used industry-wide. Also write for Bulletins 3222-F and 3615-A for other "Buffalo" fans for exhausting applications.

"Buffalo" First For Fans

BUFFALO FORGE COMPANY

175 MORTIMER STREET BUFFALO, NEW YORK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Branch Offices in All Principal Cities

VENTILATING FORCED DRAFT • AIR WASHING COOLING • AIR TEMPERING HEATING • INDUCED DRAFT PRESSURE BLOWING • EXHAUSTING

pound and wools of high grease content are scoured. Attempts have been made to extract grease from the cake but have been unsuccessful.

The treatment process has been very satisfactory. The average B.O.D. removal has been 70 to 75%. Objectionable conditions have been removed from the stream and it is again well stocked with fish.

Wool Dyeing and Finishing Wastes. One of the pressing problems of industrial wastes in New England is that of the relatively small textile mill. A concentrated effort should be made to find a treatment plant design which will solve this problem at a cost which can be met by the small mill when incorporation of the wastes into municipal sewerage lines is not possible.

In this connection, the results of a thorough survey of one such plant in Connecticut gives consideration to the pollution load contributed by the various wastes, and of the feasibility of excluding relatively pure rinse waters from treatment. Screening and filtration experiments and pilot plant tests were made. Coagulation experiments with alum have shown 70-80% reduction in B.O.D. with sludge deposits of 2-4%.

The component wastes from cotton finishing processes vary in pH from 1.5 to 12.0, and in B.O.D. from 2. to 7,000. The combined wastes generally have a pH of 9.0 to 10.0, and a B.O.D. somewhat less than domestic sewage. They contain many chemicals inhibitory to biological life—sulfuric acid, caustic soda, sodium hypochlorite, sodium peroxide, and others. Many of the component wastes are light enough to require no treatment.

Cotton Finishing Wastes. The most practical method of treatment is the high-rate biological trickling filter, with or without chemical preneutralization, because of its relatively low operating cost and its ability to withstand wide variations in character of applied wastes without serious loss of efficiency. Chemical coagulation and clarification generally are relatively expensive, due to the constant skilled attendance required and the cost of chemicals. No method of treatment should be adopted without pilot-plant experimentation.

"Good Repute" Still A Sound Asset

The stiff rise in prices of commodities of most sorts naturally has introduced a new spirit of conservatism among suppliers when it comes to accommodating the enlarged demands of many of the medium and small-sized operators. Among these claimants, however, it is conceded a good many have maintained fairly satisfactory credit standing (often on slim financing). In part, that these customers survived the upset after ending of World War II is mainly due to assistance from their suppliers. The latter, accordingly, have until now tried to do what they could to protect such customers.

In the long run, however, credit authorities state, when and if supplies of various sorts become scarce for ordinary commercial uses, the individual buyer's reputation for meeting his obligations will be once again the main criterion for judging his wartime credit status. This serves to reinforce the Biblical admonition: "A good name is to be chosen before great riches." In the present instance, this also puts new force behind the secular maxim: "Good will is won by many acts and lost by one."

Over and above all the talked-of schemes for Federal aid to small business, it can be stated that the personal records of customers and suppliers now seems likely to loom larger in importance than before.

All Knitting Trades Revise Their Rules

Recent developments are said to have demonstrated that fair-trading rules require certain adjustments, mainly intended to take care of alleged weak spots, but also to embrace new conditions occasioned by the different military and political objectives of our govern-

Series 17 of typical "H-W" CONDITIONER applications:

Berkshire Knitting Mills, Reading, Pa., installs new "H-W" CONDITIONER

(Trade Mark Reg.)

Berkshire Knitting Mills . . . the world's largest . . . always apace with progress, installed the "H-W" CONDITIONER to assure improved conditioning, increase yield of perfects, speed up seaming and looping, and reduce snagging and mending to a minimum. Berkshire also reports operation of the "H-W" CONDITIONER both economical and dependable.

BERKSHIRE Hosiery:
"Berkshire" and
"As You Like It"
now conditioned
in the
"H-W" CONDITIONER

"H-W" Conditioners for Nylon Hosiery are operated automatically by steam or electricity. Built in three standard sizes: capacities 96 dozen pair, 120 dozen pair, and 240 dozen pair per charge respectively.

Full particulars in Bulletin H1-3, yours for the asking.

The Industrial Dryer Corporation
STAMFORD, CONN.

ment. That is, during and right after World War II, knitwear manufacturers and distributors generally had more leeway in their individual operations than they expect to have from now on.

This latest military adventure of our country is generally believed likely to witness a definite tightening of government controls. That is, to preserve liberty elsewhere in the world, liberty must be given up in the U. S. A. The knitwear people don't like it, but they will have to go along, because nothing else is left for them to turn to, they admit.

Accordingly, sales contracts are being tightened up, placing more compliance-obligation on the buyer, and narrowing-down his recourse in cases where he disagrees with his suppliers. It is to be expected that under pressure the average buyer will extend this process to include his own customers, and the wholesale and retail outlets eventually may have to resort to "spot-cash" transactions on a rationed basis of sales.

Production Costs Certain to Soar

Business associations and credit-checking bureaus all over the country commenced some weeks ago to assist our government in controlling what they regard as unwise expenditures and new indebtedness among the rank and file of manufacturers in each category. Most such producers are small concerns, but even their limited scope does not prevent their becoming very important economic factors in their home communities, it is explained.

This especially prevails in the textile-apparel field, observers say. The many small knitwear firms in the U. S. are credited with a fairly large aggregate share of the production, but mostly they are regarded as sparsely furnished with working capital. A stiff price rise in the manufacturing supplies they depend on, it is now contended, accordingly lessens their ability to meet financial obligations promptly. On top of this has come the actual or impending broad advance in their labor costs.

All this helps to alert credit authorities to rigidly perform their duty of searching into all phases of every creditor's fiscal position.

DISPERSIONS and SOLUTIONS for a wide variety of novel finishes...

It will pay you to try out one or more of the Onyx series of Xyno Resins and see for yourself what effects of springiness, crispness and stiffening you can get on cotton, viscose, acetate, nylon and bemberg, as well as mixed constructions. They are producing many interesting finishes on ninons, marquisettes, organdies, foulards, taffetas, jacquards, tie fabrics and ribbons, as well as on other fabrics.

Water dispersions include Xyno Resin AA40 . . . water thin, with particles of moderate size; Xyno Resin X99 . . . thin, with large particles; Xyno Resin 362 . . . viscous, with large particles; and Xyno Resin S69 . . . water thin, with fine sized particles.

Water solutions include Xyno Resin R . . . completely soluble in 50% active form. All Xyno Resins require no heat treating or curing, and involve no changes in processes or equipment.

Alone or in combination they offer opportunities for unique and sales-stimulating effects warranting considerable experimentation.

Write for Technical Bulletin TX-2, Onyx Resins. It covers the complete line of Xyno Resins as well as the Onyx Resins . . . NCF Paste and Liquid Resin SS used for chintz effects and crush resistance.

onyx CHEMICALS FOR DYEING · FINISHING · PRINTING

ONYX OIL & CHEMICAL COMPANY
TEXTILE DIVISION
103 MORRIS ST., JERSEY CITY 2, N. J.
CHICAGO · BOSTON · CHARLOTTE · ATLANTA

In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que. For Export: Onyx International, Jersey City 2, N. J.

PERSONAL NOTES

ABOUT MEN YOU KNOW

The Dunean Mills of J. P. Stevens & Co., Inc., Greenville, S. C., have announced the appointment of **Clifford B. Denison** as director of public relations.

Charles P. Gordon, Jr., formerly assistant superintendent, has been made superintendent of dyeing and finishing for Riegel Textile Corp., Trion, Ga., to succeed E. H. Dobbins, recently resigned. Joe O'Neill was appointed general assistant superintendent, his former duties as chief chemist being assumed now by Ernie Freeman, Jr.

John K. Cochran, chief engineer for Duplan Corp. for the past five years, has been appointed general manager of the firm's ten textile mills, with headquarters in Hazelton, Pa.

The Seminole Mills, Statesville, N. C., have been placed under the general supervision of **Carl A. Boggs,** who is also general manager of United Rayon Mills, Elberton, Ga., and the Augusta (Ga.) division of Aiken Mills.

The U. S. Department of Agriculture has announced the appointment of **Dr. Leonard Smith** and **George Buck** of the National Cotton Council

Dr. Smith

Mr. Buck

of America as collaborators in the Department's Bureau of Agricultural and Industrial Chemistry. Dr. Smith and Mr. Buck will assist in planning a more effective research program on the utilization of cotton.

Edward F. Addiss has resigned as executive vice-president of Verney Corp. He will, however, continue as a member of the board of directors.

Robert E. Gregg, formerly assistant general sales manager in the New York office of Kendall Mills, was recently named general sales manager of the finishing division at Walpole, Mass.

Thomas Robson was recently elected president of Wayne Knitting Mills, Fort Wayne, Ind., to succeed the late John J. Kronenberg. **H. E. Bain,** secretary and sales manager, was named vice-president in charge of sales and a director; and **W. D. White** was elected vice-president in charge of manufacturing. **Hubert Talbot** succeeds Mr. Bain as secretary and was made treasurer also.

E. F. Williams has resigned as resident manager of the Assabet Mill, Maynard, Mass., subsidiary of American Woolen Co.

Daniel B. Altman will head The Kuljian Corp.'s new department of management engineering, according to a recent announcement by James

Mr. Altman

L. Cherry, executive vice-president. Mr. Altman was formerly with Hare, Bready & Co. and prior to that was with Day & Zimmerman as engineering consultant.

W. P. Ligon has succeeded his late brother, H. A. Ligon, as a vice-president of Reeves Bros., Inc. In addition, Mr. Ligon was made treasurer of Fairforest Co., Mills Mill, Grace Cotton Mill, Chesnee Mills, and Warrior Duck Mills, and vice-president of Chesnee Mills and Grace Cotton Mills, all subsidiaries of Reeves Bros. **Charles D. Green** was elected vice-president of the subsidiaries in the Spartanburg area and succeeds Mr. Ligon as general manager of these plants.

W. F. FitzGerald recently resigned as president and director of The Wool Bureau, to accept a position with Commercial Factors Corp. Until the

"Cotton Slashing"

The series of 21 articles which appeared in TEXTILE INDUSTRIES, by Dr. Paul V. Seydel, under the title "Cotton Warp Sizing," has been published in book form.

"Cotton Slashing" is now available to members of the industry. In addition to the complete series on "Cotton Warp Sizing," which has attracted much interest, the book contains the most comprehensive bibliography on the subject that has been compiled from both books and periodicals, information of specific technical value related to weaving, calculations, tables, a nomograph, forms for checking and keeping records, and other useful information.

Bound in attractive blue non-flexible covers for the mill man's permanent library, it may be secured for $3.50 per copy. Artcraft flexible cover, pocketsize, available with new or renewal subscription to TEXTILE INDUSTRIES, 3 years' subscription, plus book, $5.00.

TEXTILE INDUSTRIES

806 Peachtree St., N.E.

Atlanta 5, Ga.

election of a new president in November, the Bureau will be administered by an executive committee, with **F. Eugene Ackerman** as chairman.

Mr. Berry

Riegel Textile Corp. recently announced the promotion of **William Berry** to the position of executive

Mr. Reid

vice-president. **W. E. Reid** will take over Mr. Berry's previous duties as vice-president in charge of sales. Both men have been with Riegel for many years.

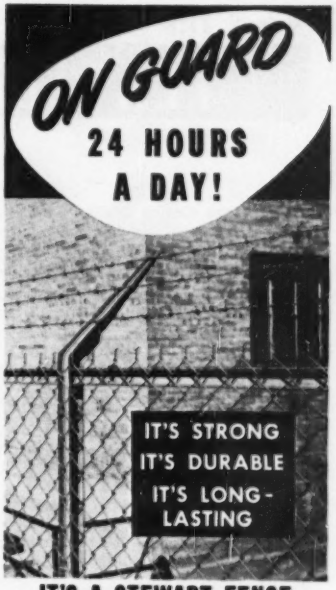
Obituaries

Funeral services were held July 31 in Yonkers, N. Y., for **Frederick B. Klein**, 63, chairman of the board of Alexander Smith and Sons Carpet Co. Mr. Klein died of a heart attack on July 28.

At the age of 76, **Frank M. Shipley**, former president of the old Piqua (O.) Hosiery Co. and director of BVD Corp., died on August 8 after a long illness.

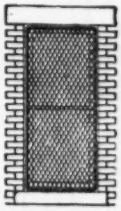
Alexander Currie Holt, 75, died in Greensboro, N. C. on July 14. He was connected with Cone Mills Corp. for 41 years, and was treasurer of Proximity Manufacturing Co. when he retired in 1945.

On August 16 **Albert F. Bittner** died in Slatington, Pa., at the age of 69. Mr. Bittner, before his retirement last year, was owner and president of the A. F. Bittner Silk Co.



IT'S A STEWART FENCE

Notice the sturdy All-Beam framework . . . the extension arm and line post—an integral unit. Stewart Non-Climbable Chain Link Wire Fence, the heaviest and strongest manufactured, features a number of exclusive structural advantages you can't afford to overlook. Write for folder "Here's why you should buy a Stewart Chain Link Wire Fence."



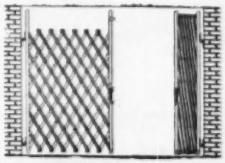
WINDOW GUARD
(Wire or Iron)

Made with round or channel frames to fit any size or shape opening. When requesting prices please give measurements and send diagrammatic sketch.

WIRE MESH PARTITIONS—Sectional

Fit any height or width. Easily and quickly erected. When writing for prices please give all measurements involved.

STEEL FOLDING GATES



Made in single or double gate construction to fit any width opening. Prices on request. Please give width and height of opening.

THE STEWART IRON WORKS CO., INC.
1724 Stewart Block Cincinnati 1, Ohio

Stewart IRON and WIRE FENCES

WHAT THE

TEXTILE MILLS

ARE DOING

Hermitage Cotton Mills, Camden, S. C., have acquired controlling interest in Marsales Co., Inc., New York, N. Y., surgical gauze. Reuben B. Pitts, Jr., formerly with Hermitage mills, has been made treasurer of Marsales Co.

673 houses owned by **Patterson Mills Co., Inc.,** and **Rosemary Manufacturing Co.,** Roanoke Rapids, N. C., are being offered for sale, with company employees being given first preference.

A building at Concord, N. C., has been purchased by the newly chartered **Gunter-Ashmore Manufacturing Co., Inc.,** for the production of woven plastic fabrics. Charles W. Gunter is president and treasurer of the new firm, and Mrs. Agnes K. Gunter has been made secretary. Other officers are: C. J. Ashmore, formerly with Pomona Manufacturing Co., Greensboro, N. C., vice-president and general manager; and J. W. Abernethy, Newton, N. C., vice-president.

Brookwood Mills, located near Taylorsville, N. C., have been sold to a corporation headed by C. A. Ross, president of **Barbet Mills,** Lexington, N. C. The sale includes buildings, plant machinery and equipment, as well as a mill village and a small attached plant.

The Greer, S. C., plant of **Victor Monaghan Co.** is undergoing a $3,000,000 expansion program, which will include construction of an additional 55,000 sq. ft. of building area and installation of new machinery. The Greer plant operations are expected to be gradually changed from the present narrow loom plain weaving to wide box loom production.

A new hosiery plant, owned by P. L. Logan, J. W. Blake, and Mrs. Blake, will be located at Enterprise, Ala., for production of work and dress socks.

Textron Southern's Ladlassie Plant in Anderson, S. C., is in process of being completely air conditioned.

A majority interest in Brighton Mills, Inc., of Shannon and Forsyth, Ga., has been acquired by **Burlington Mills Corp.** Management of operations at the mill will continue under the direction of its president, Howard R. Hart, according to J. C. Cowan, Jr., president of Burlington Mills.

Glenn E. Peterson, 3106 Garland Ave., Detroit, Mich., is principal incorporator and representative of the recently chartered **Gold Medal Textile Corp.** Textile products of various kinds will be manufactured.

New knitting machines and auxiliary equipment are being installed at **Janedale Hosiery Mills, Inc.,** Blackwood, N. J., as part of an improvement program.

Woolen goods will be manufactured at the recently incorporated **Maupin Woolen Mills, Inc.,** Eaton Rapids, Mich. Kenneth A. Maupin, 520 Michigan Ave., is president and representative.

Williams & Petty Hosiery Co., Inc., Carthage, N. C., headed by B. G. Williams, has been recently organized and will manufacture full-fashioned rayon hosiery for women.

In addition to its present manufacture of cotton yarns, **Morowebb Cotton Mills,** Dallas, N. C., are planning a department of production of rayon and other synthetic yarns.

The Old Fort, N. C., division of **Clearwater Finishing Co.,** has plans under way for the construction of a one-story addition to its plant.

Contract has been let by **Pilot Full-Fashion Mills, Inc.,** Valdese, N. C., for an addition to the mill, which is expected to cost over $100,000.

Plans are under way for construction of an addition to the mill of **Industrial Rayon Corp.,** Cleveland, Ohio, viscose rayon yarns. The cost of the addition and improvements in the present plant is reported to be about $500,000.

All outstanding stock of Prudential Industries, Inc., Philadelphia, Pa., cotton rugs, has been acquired by **Samarkand Rugs, Inc.,** New York, N. Y. The acquired company, which will

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be operated as a subsidiary, will concentrate on modern type rugs with twist background, discontinuing the oriental type rugs previously manufactured.

A modernization program is under way at **Federal Knitting Co.,** Philadelphia, Pa., full-fashioned hosiery for men and women. The program, which will include installation of additional knitting machines and other equipment, will cost over $200,000, according to reports.

The recently chartered **C. W. Anderson Hosiery Co.** will operate a knitting mill at Clinton, S. C. C. W. Anderson is president of the new organization.

Greenwood (S. C.) Mills, cotton and rayon products, have plans for operation of a new filament rayon box loom weaving mill and finishing unit, in conjunction with their new Harris mill. The new plant, which will comprise several large units, is expected to cost nearly $5,000,000, with equipment.

F. D. Rainey is president of the recently organized **Featherknit Fabrics, Inc.,** which will operate a mill in Greenville, S. C., for manufacture of rayon knit specialties.

More than eighty new looms and auxiliary equipment were recently installed at **Opelika (Ala.) Textile Mills, Inc.,** sheetings, ducks, drills, etc.

Bear Brand Hosiery Co., Chicago, Ill., seamless and full-fashioned hosiery, children's ribbed hosiery and anklets, has made arrangements with Fayetteville (Ark.) Industrial Foundation for construction of a one-story building in Fayetteville to be used primarily for production of anklets. It is reported that Bear Brand is planning two additional mills in the same locality.

A one story addition to the plant of **Maryon Hosiery Mill, Inc.,** Carrollton, Ga., is planned, to be equipped for increased capacity.

Grantville (Ga.) Mills, colored yarns, are planning a one-story addition to be equipped for dye house service.

A three-story addition to the mill of **Swift Manufacturing Co., Inc.,** Columbus, Ga., now under construction, will be used largely for production of fiber and other non-cotton materials for automobile service.

LeMoine Yarn, Inc., Leicester, Mass., recently chartered, is headed by Wilfred A. Theberge as president and treasurer. Cotton and rayon yarns will be manufactured.

The dye, bleach, and finishing mill of **Ohio Falls Dye & Finishing Works Co.,** located at 731 E. Madison St., Louisville, Ky., has been liquidated, and a new organization, with the same name, has been chartered to take over the firm. Charles G. and Edwin G. Middleton, and Louis Seelbach head the new company.

Pittsfield (Me.) Industries, Inc., recently organized and headed by J. R. Cianchette, president, and Joseph S. Buker, treasurer and general manager, have arranged for the purchase of the mill and business of Lancey G. Milliken, Inc., wool and rayon processing, carbonizing, etc. Mr. Buker has been associated with the Milliken firm for a number of years.

The newly chartered **International Braid Co.,** Fall River, Mass., will take over and operate the International Braid Corp. Arthur J. Murphy is president of the new company.

Alterations and improvements to its branch mill at Springfield, Mass., are planned by the **William Carter Co.,** Needham Heights, Mass.

Contrary to its recent announcement that the Jackson mill would be changed over to rayon filament weaving, **Textron, Inc.,** Nashua Mills, N. H., has decided to continue to manufacture wide sheetings at the Jackson mill.

The newly chartered **Columbia Finishing Co., Inc.,** will operate a dyeing, printing, and finishing mill at Paterson, N. J.

Samuel Nuissbaum, 1499 E. 28th St., Brooklyn, N. Y., is attorney and representative for **Ann Adams Knitwear, Inc.,** recently organized for the manufacture of outerwear.

A textile printing plant will be operated by the recently chartered **Vinyl Printing & Embossing Co.** Sylvia Feldstein, 1450 Broadway, New York, N. Y., will represent the new firm.

The mill of **A. B. Carter, Inc.,** at Lincolnton, N. C., has been purchased by **Globe Mills Co.,** Mount Holly, N. C., and will be operated as a branch mill. A modernization and improvement program will be carried out.

Two one-story buildings, to be used for warehouse service, are under construction at the Woodlawn plant of **American Yarn & Processing Co.,** Mount Holly, N. C.

Cotton yarns will be manufactured in a mill at McArdenville, N. C., by

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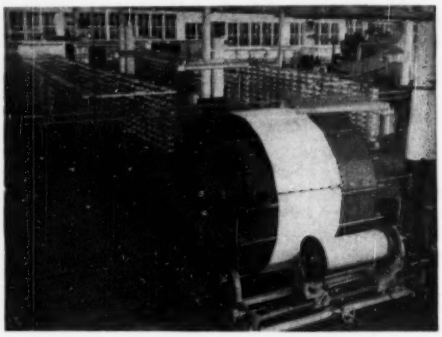

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the recently chartered **Pharr Yarns, Inc.** W. J. Pharr of McArdenville, and R. J. and Daniel Stowe of Belmont, N. C., will head the new company.

Machinery and equipment of **Diamond Knitting Mills, Inc.,** Newton, N. C., inactive for several months, have been disposed of to interests in Mexico, D. F., and the mill has been dismantled.

Dale Dwyer, Inc., Southern Pines, N. C., was recently chartered for the manufacture of rayon fabrics. Warnock Deadwyler, Jr., of Southern Pines and W. A. McKeithan, Pinehurst, N. C., are incorporators.

Maurice and Charles M. Robinson, 343 Doyle Ave., Providence, R. I., are incorporators of the newly chartered **Atlantic Knitting Corp.,** which will operate a mill in Providence.

Belton (S. C.) Bagging Co., knitting yarns, press cloth, jute bagging, etc., is planning construction of a one-story addition to its mill, to be equipped for increased capacity.

The former plant of Mackintosh Mills, Newnan, Ga., has been purchased by **American Thread Co.,** Clover, N. C.

Piedmont Plush Mills, Greenville, S. C., have plans under way for a one-story addition to be used for expansion in the dyeing division.

Contract has been let by **Slater (S. C.) Manufacturing Co.,** rayon and other synthetic fabrics, for a one-story addition to its plant, to be used for slasher room service.

Clifford S. Clark is president of the newly chartered **Neeley Mills, Inc.,** York, S. C., which has taken over and succeeded the local Neeley Cotton Mills, Inc., carded yarns.

Mooresville (N. C.) Mills have leased Abernethy Mills, Inc., Statesville, N. C., for a five-year period. According to reports, the agreement included option to buy during the first year of the lease. The output of this combed yarn spinning mill will eventually be used by Mooresville Mills.

Wamsutta Mills recently leased the top floor and purchased the spinning equipment of Kilburn Mill No. 2 at New Bedford, Mass. The machinery acquired comprises 30,000 spindles and supplementary equipment.

Approximately 8000 additional square feet of floor space have been leased by **Girard Knitting Mills,** Philadelphia, for production of rayon and cotton swim trunks. Previously the mill has produced only sweaters.

Linn Mills Co., Landis, N. C., has purchased White Parks mill, Concord, N. C., for manufacture of cotton yarn.

An expansion program is in progress at **Clinton (N. C.) Cotton Mills,** which will include the addition of 300 new looms and 16,000 spindles. Machinery and construction of an extra floor for their installation is expected to cost approximately $1,250,000.

Woodside Mills recently placed an order for spinning machinery, amounting to approximately one million dollars, for installation in their plants at Simpsonville and Fountain Inn, S. C.

Maywood Hosiery Mills, Inc., Cordele, Ga., have been sold to Herbert B. Lockwood of Charlotte, N. C. Included in the transaction was the firm's subsidiary, Will de Laine Hosiery Mills, Inc., at Charlotte, of which Mr. Lockwood formerly was secretary-treasurer.

Ben Freilich is president of the newly organized **Universal Dyeing and Finishing Mills, Inc.,** which are occupying part of the space at 55 Moultrie St., Brooklyn, N. Y., formerly used by Horn Piece Dye Works. Michael Gilde, previously with the latter firm, is head of the finishing department at Universal.

Plans are under way for a one-story addition to the dye plant of **Verney Corp.** at Peterboro, N. H. It will be used to house a 110 foot drying unit.

A site has been purchased at Clarkesville, Ga., by **United Merchants & Manufacturers, Inc.,** for erection of a building to be used for a rayon weaving plant, according to a recent announcement.

The Drapery Fabrics Division of **Textron, Inc.,** was recently sold to Spectrum Fabrics Corp., New York, N. Y. This sale is in line with the company's new policy of concentrating on grey goods, Indian Head, and domestics.

A visual program, which includes a "Sight-Screener" to enable employees to determine whether or not they have normal vision, has been adopted by **Riegel Textile Corp.,** Trion, Ga. This program is considered a progressive step in assuring proper visual efficiency, comfort, and safety on the job.

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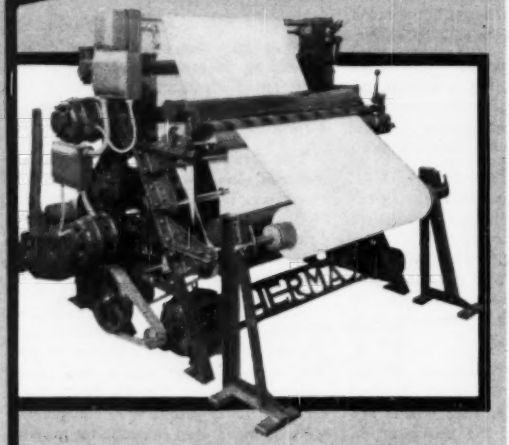

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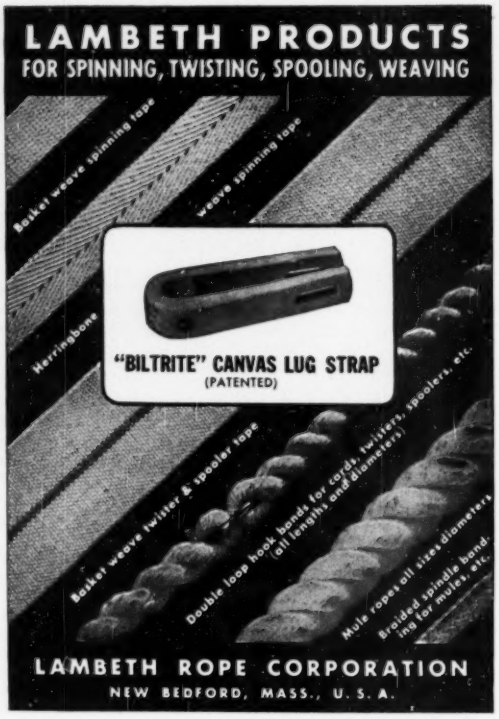
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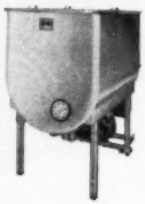

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First Listing of New Publications

10-1. Spindle Oiler. New Brochure describing the new battery powered Brown Dynalube Spindle Oiler, which is claimed will save up to 66% of the cost of oiling spindles. Fully described with pictures of operation. Brown Dynalube Co. P. O. Box 86 Charlotte, N. C.

10-2. New Bearing Surface Material. Booklet describing a new self-bonding metallizing material called Spraybond Wire, which provides long-wearing bearing surfaces. Many users report increases in bearing surface life as much as 25 times that obtained any other way, according to the booklet. Many suggested applications and uses described. Metallizing Engineering Co., Inc., 38-14 30th St. Long Island City, N. Y.

10-3. Water Hardness Tests. Bulletin 1-RE-50 describes extremely rapid, simple and accurate "one-minute tests" for determining water hardness. Procedures, reagents and equipment for tests are pictured and described. Tests contrast with the old "soap-shaking" method and accuracy to within 1 ppm. has been demonstrated according to the bulletin. Hall Laboratories, Inc., Hagan Bldg., Pittsburg 30, Pa.

10-4. Air Compressors. New Bulletin describing the "T" Series Stationary Air Compressors which consists of two lines, one designed for normal industrial pressures of 100-125 pounds; the other rated at 200 pounds continuous service, and up to 250 pounds intermittent pump-up service. Cross-sectional views, engineering data, sizes and dimensions. Ingersoll-Rand Co. 11 Broadway, New York 4, N. Y.

10-5. Motor Driven Trolley. Literature available describing the new, low cost Moto-Trolley which is designed for attachment to standard lug-mounted electric hoists and may be adjusted to accommodate a wide variety of beam sizes. Engineering data and full description. Industrial Equipment Co. 315 N. Ada St., Chicago 7, Ill.

10-6. Vari-Pitch Drive. New booklet describing this method of instant speed control covering most speed changing needs from 1½ to 40HP. To increase the speed move the motor toward the driver sheave, while moving the motor away decreases the speed, according to the booklet, and it further stated that the automatic Vari-Pitch sheave has been used successfully on all types of textile machinery. Allis-Chalmers, Milwaukee 1, Wis.

10-7. Corrosion Protection. New literature available on Nukemite synthetic resin coating which is described as a protective coating for corrosive conditions to metal, concrete and wood surfaces exposed to acid or alkalies. Film described as leak proof, odorless and non-contaminating, and in no way similar to oil base paints except in method of application. Nukem Products Corp. Buffalo 20, N. Y.

10-8. Flow Controller. Bulletin 950 announces a new automatic Flow Controller which provides lower maintenance with higher accuracy and fast response. Flow rate measured by Penn Magna Clutch Flow Meter which utilizes a frictionless magnetic coupling between the float on one hand and the pen and control mechanism on the other. Accuracy describe along with other engineering data. Penn Industrial Instrument Corp., 3116 North 17th St., Philadelphia 32, Pa.

10-9. Chemicals From Coal. Properties of fifty-eight commodity and specialty chemicals recovered in the coking of coal or derived from the distillation of coal tar are described in a new 44-page booklet TO5-500. Suggested uses. Koppers Company, Inc., Pittsburg 19, Pa.

10-10. Floor Maintenance Handbook. "How to Care For Your Floors", is available at a handbook giving, in addition to a pictorial presentation on the correct ways to remedy 16 different types of floor ailments, a step-by-step instruction for the normal maintenance of practically every type floor and floor covering. S. C. Johnson & Son, Inc., Racine, Wis.

10-11. Bakelite. New booklet summarizes the new ideas, new products and a wide range of applications in consumer and industrial fields which have appeared since Bakelite polyethylene resins were placed on the market. Bakelite Division, Union Carbide and Carbon Corp. 300 Madison Ave., New York 17, N. Y.

10-12. Air Diffuser. Bulletin 32 describes how to apply air diffusers in textile plants. Folder tabulates factors governing atmospheric conditions in textile installations. Anemostat Corporation of America, 10 East 39th Street, N. Y.

10-13. Materials Handling. A 36 page, 3 color catalog presenting the entire Rapistan line of industrial casters, platform trucks, and hand trucks. Complete specifications of the equipment, plus tips on choice of models best suited to various handling problems. The Rapids-Standard Co., Inc., Grand Rapids 2, Mich.

10-14. Abrasion Testing. Bulletin No. 5003 describing the new model 140 standard abrasion testing set, which reveals important information regarding the wear life of materials in their wet state in comparison with abrasion resistance while dry. Methods of testing pictorially described. Taber Instrument Corp., 159 Goundry St., North Tonawanda, N. Y.

10-15. Electrical Equipment. The newly compiled "Abridged Listing" features over 85% of the complete Crouse-Hinds line of Condulets, plugs and receptacles, industrial lighting fixtures, industrial controls, etc. marginal tabs flag each of the 18 chapters for quick reference. Crouse-Hinds Co. Syracuse, N. Y.

10-16. Tension Controls. New folder describing Tension Compensation and automatic tension controls. Three models — Standard, warp, and twin disc fully described with their specific applications. Walter Kidde & Co. Inc., 675 Main St., Belleville 9, N. J.

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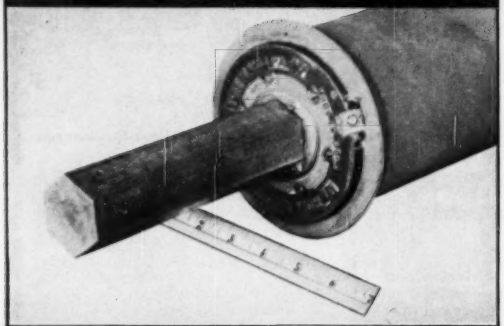

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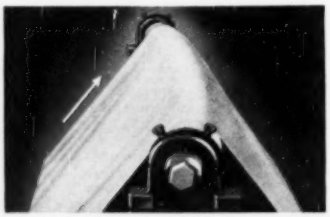

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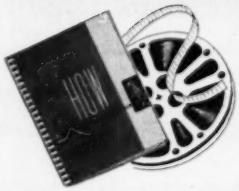

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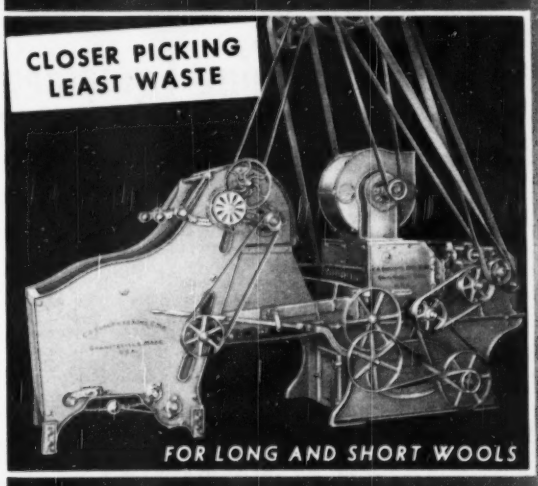

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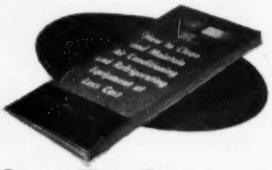

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338. TEXTILE PRINTING COUNTERS—Catalog No. 75 illustrating and describing Productimeter Yardage and Printing Counters.—DURANT MFG. CO., Milwaukee 1, Wisc.

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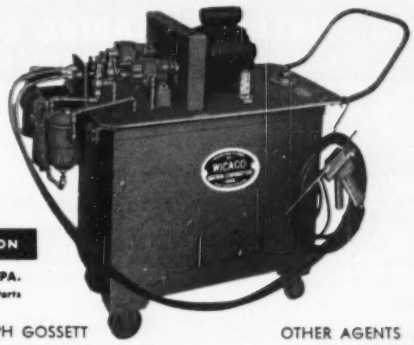

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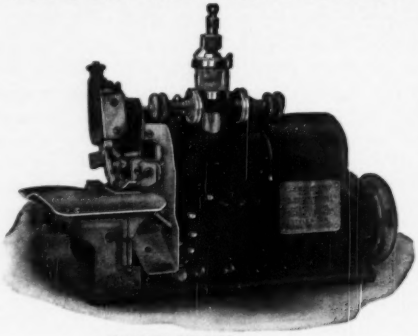

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515. TEXTILE COUNTER—Catalog No. 50 illustrating and describing complete line of Production Loom Pick Counters; Hank Counters; Yardage, Electric and Predetermined Counters; Tachometers, etc.—DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

518. WEAVE ROOM ACCESSORIES—Weave-room accessories catalog and literature on new plastic bronze bearing sheave, which solves a troublesome weave room problem.—EMMONS LOOM HARNESS COMPANY, Lawrence, Mass.

517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, containing installation pieces features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. NIAGARA TWIST-SETTER—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., Atlanta, Ga.

519. WOODEN BEAM HEADS, WARPER BEAMS, AND WARPING MACHINERY FOR ALL FIBERS—62-page illustrated booklet descriptive of and giving specifications for the Allen line of beam heads, warper beams, warping machinery, stop motions and cloth rolls.—ALLEN COMPANY, New Bedford, Mass.

521. STEEL WARP BEAMS—39 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

523. OVERHEAD MOUNTS FOR BIGGER LOOM BEAMS—Folder illustrating and describing how bigger beams can be adapted under all mill conditions. Includes handy Multiplier Table showing increased yarn capacity possible with bigger beams.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

524. JOHNSON WARP SIZES—13 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Paterson, N. J.

526. LOOM EQUIPMENT—Folders on flat heddles, frames, and reeds for all types of looms and weaves.—WALKER MFG. COMPANY, Philadelphia 35, Pa.

528. STRAPPING—Looms and harness strapping, complete line. Full information supplied on request.—TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing on can dryers, planers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atlanta Ave., Charlotte, N. C.

531. EVENNESS TESTER—Folder explaining how this Tester take the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION Charlotte, N. C.

DYEING, FINISHING, CLOTH ROOM . . .

600. BIOLOGICAL ASPECTS OF INSECT DAMAGE TO WOOL—Booklet giving complete picture of insect damage to wool from biological standpoint.—GEIGY CO., INC., New York N. Y.

602. ALUMINUM IN THE CHEMICAL INDUSTRY—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

604. STABILON—For Napthol Dyeing and Printing—reduces cracking and brightens Napthol shades by stabilizing fast color salts and bases. Prevents premature decomposition of stock feeder solutions and print pastes—fully discussed in booklet available.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

605. CONTINUOUS AUTOMATIC EXTRACTING MACHINE—Folder describing the most efficient method of extracting excess liquid from fibrous materials.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

607. DYEING OF TEXTILES—Bulletin S-1334 explains how uniform results can be assured if process is temperature controlled. New regulator with electric pilot has floating metal on which settings are changed by turning a knob. Diagrams of system.—SARCO CO., INC., New York City, N. Y.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for woolens.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

611. BRUSHING AND SHEARING MACHINES—Illustrated literature on the new Hermas Brushing Machine for use light shearing to heavy duck; also on Hermas AV Shears.—HERMAS MACHINE CO., Hawthorne, N. J.

614. STRIPS IN ROLLS—Form No. CP-942 illustrated folder showing over 25 slitters and roll winders for textile use.—CAMERON MACHINE CO., Brooklyn, New York.

615. NICKEL AND ALLOYS—Bulletin T-6 on the resistance of nickel and its alloys to corrosion by caustic alkalies—24 pages containing illustrations and tables to show performance of materials in a variety of fields, including Viscose rayon.—INTERNATIONAL NICKEL CO., INC., New York, N. Y.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

622. FILT-R-STIL—Attractive illustrated booklet describing the FILT-R-STIL method of chemically purifying water.—AMERICAN CYANAMID & CHEMICAL CORP., New York 20, N. Y.

624. STRAIGHTENING THE WEFT IN CLOTH—Article describing the progress made in this field, and latest machinery available for both skewed and bowed weft straightening.—MOUNT HOPE MACHINERY CO., Taunton, Mass.

625. BALL BEARING ROLLER TYPE SCRAY—Circular No. 904 describing the scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

627. SINGLE APRON STOCK DRYERS—Folder presenting the latest idea in automatic drying which every mill having drying problems can profitably use to meet modern manufacturing conditions.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

630. VAT DYEING OF WOOL—Write for Calco Technical Bulletin No. 797 outlining fundamental dyeing procedure, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO. Round Brook, N. J.

632. LUG STRAP WASHERS—Series 1-C illustrated bulletin detailing right and wrong application and use of washers.—E. H. JACOBS NORTHERN DIVISION Danielson, Conn.

633. PRINTING WITH AROYE PIGMENT COLORS—Bulletin P-1 describes preparation and application of pigment water-in-oil emulsions for printing cotton, rayon and other fabrics.—INTERCHEMICAL CORP., TEXTILE COLORS DIV., Hawthorne, N. J.

639. ROTARY DYEING MACHINE—Booklet No. 425 illustrating the features of these stainless steel machines used for dyeing hosiery, hats, gloves, slacks, etc.—SMITH, DRUM & CO., Philadelphia 33, Pa.

DYESTUFFS, CHEMICALS, SOAPS . . .

701. MAGNESIUM APPLICATIONS—Case history information on magnesium applications in the textile field, published bi-monthly with latest developments in the magnesium industry.—DOW CHEMICAL CO., Midland, Mich.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 24 page booklet outlining methods of silk-soaking and giving investigation on the soaking, back winding and degumming of silk.—HART PRODUCTS CORP., New York City.

710. HERCULES PINE OILS—Leaflet briefly describing advantages of using this manufacturer's oil in wet processing of textiles.—HERCULES POWDER COMPANY, Wilmington, Del.

712. VANDERBILT MATERIALS—Available is a 6-page booklet describing non-textile fungicides, and their use in textile operations.—R. T. VANDERBILT CO., INC., New York.

713. LIQVATINE ED—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, New York City.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletins on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

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728. SYNTHETIC FIBERS — Attractive folder briefly describing the company's products used in the manufacture of synthetic fibers. — HERCULES POWDER COMPANY, Wilmington, Del.

733. LEVELENE—Booklet describing use of Levelene for leveling vat and direct colors. Also for stripping down vat colors.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

748. RAPIDASE FOR DESIZING—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

755. LUPOMIN—Leaflet outlines the advantages of the cation active softener which is suitable for use on cotton, linen, silk, wool, synthetic fibers and mixed fabrics. A small percentage of Lupomin gives a supple, smooth hand.—JACQUES WOLF & CO., Passaic, New Jersey.

756. TEXTILE SPECIALTIES—Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

762. ONYX TECHNICAL DATA SHEETS—Two new data sheets describing the use, advantages, and applications of Kyro Resins S 69 and Kyro Resin 3562.—ONYX OIL & CHEMICAL COMPANY, Jersey City 3, N. J.

765. HOSIERY FINISHES AND FORMULAS—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

768. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. SURFACE TENSION DEPRESSANT — The Booklet, "Mercerizing and Alkamerse—The Ideal Dry Mercerizing Penetrant," introduces a new product which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., New York, N. Y.

771. "STARCH STABILIZER" — Folder on Vanesta, a product used for textile sizing and printing, discussing stabilization and the results obtained. —R. T. VANDERBILT CO., New York 17, N. Y.

773. TECHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operations, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., Jersey City 3, N. J.

774. ROYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

775. CAUSTIC SODA—Bulletin No. 6, an 80-page technical bulletin, is the latest in Solvay's well-known series. The text is profusely illustrated with photographs, tables, graphs and diagrams.—SOLVAY SALES DIVISION, 40 Rector Street, New York 6, New York.

776. SERIZYME—Bulletin describing the properties and characteristics of Serizyme, a standardized liquid proteolytic enzyme preparation which can solubilize various types of protein substances.—WALLERSTEIN COMPANY, INC., 180 Madison Avenue, New York 16, N. Y.

777. HOSIERY DYEING—Catalog on hosiery dyeing machinery, skein dyeing machinery, package dyeing, scouring and drying equipment. — SMITH, DRUM AND CO., Philadelphia 33, Pa.

780. HYDROGEN PEROXIDE — Compilation of physical data and properties of hydrogen peroxide. Reactions listed in organic and inorganic chemistry along with applications.—BECCO SALES CORP., Buffalo, N. Y.

KNITTING . . .

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

803. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., Philadelphia.

805. STATISTICAL SURVEY—Covering the Full-Fashioned Hosiery knitting industry in the United States and Canada.—TEXTILE MACHINE WORKS, Reading, Penn.

809. TEXACO IN THE KNITTING INDUSTRY—Folder on knitting mill lubrication.—THE TEXAS CO., New York, N. Y.

816. ALUMINUM BEAMS—Catalog No. 1-31 describes Hayes magnesium and aluminum specialties for the textile industry, illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

812. CIRCULAR KNITTING MACHINES—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Philadelphia 34, Pa.

813. THE NEW REINER HIGH SPEED TRICOT MACHINE—165" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance. — ROBERT REINER, INC., Weehawken, N. J.

816. THE NEW REINER KAYLOOM—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine. — ROBERT REINER, INC., Weehawken, N. J.

817. AUTOMATIC SELECTIVE STRIPPING MACHINE—Descriptive and illustrative folder, entitled "If It's Stripes, Consult Brinton," now available. Important mechanisms involved in the process are described.—H. BRINTON COMPANY, Philadelphia, Pennsylvania.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION — Catalog 45-A describing Light Metal Tricot Beams made in Standard and special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC., Milton, Pa.

820. VARIABLE STRIPES AND PLAIDS — Booklet describing Supreme Models 8A and 8A-ROF Stripers for knitting plaids, checks, "floatless" designs and variable stripes.—SUPREME KNITTING MACHINE CO., INC., 160 Johnson Ave., New York.

828. THE KIDDE KNITTER—Bulletin describing the newest in Raschel-type warp knitting machine and higher production attained with it. — KIDDE MANUFACTURING CO., INC., Bloomfield, N. J.

SEWING MACHINES . . .

807. "FLATLOCK" MACHINE—Folder No. 202 describing, with illustrations, flat seaming operations on knit underwear, lingerie, etc. — WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

815. THE NEW UNION SPECIAL LOCKSTITCH MACHINE—Information on the new model which cuts production time on sewing operations is contained in Bulletin No. 24A.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

916. THE SUPERLOCK—Bulletin 828 describing and illustrating the W & G Superlock overseaming machine.—WILLCOX & GIBBS SEWING MACHINE CO., 214 W. 39th St., New York 18, N. Y.

919. FEED-OFF-THE-CAM FELLING MACHINE —Bulletin No. 896. Illustrates and describes the "Fairlock" with Automatic Lubrication, for lap seam felling on shirts, pajamas, shorts, slacks, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY — Profusely illustrated. Gives clear, concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits. — CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use.—MEESE, INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1005. BASKETS, HAMPERS & TRUCKS—This 24-page catalog is profusely illustrated and contains complete description on the Dandux line, especially designed for the textile industry.—C. R. DANIELS, INC., Daniels, Md.

1006. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1009. CANVAS PRODUCTS—A complete listing with illustrations of Dandux Canvas products. For easy fingertip reference and handy file size. Brief but factual information.—C. R. DANIELS, INC., Daniels, Md.

1010. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well-illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN COMPANY, INC., Louisville, Ky.

1027. SINGLE-BEAM CRANES—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1030. C-D HOLLOW WARE—This 32-page catalog, C-D-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 33, Del.

MISCELLANEOUS . . .

1101. AUTOMATIC BOBBIN REFINISHER—A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2304 N. 30th St., Milwaukee, Wis.

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS — Illustrated 16-page booklet, No. 579 gives data on hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. INTERPRETATION OF ANALYSIS — In compiling this brief collection of terms which most frequently appear in analysis of certain active chemicals, an attempt has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training. —NOPCO CHEMICAL CO., Harrison, N. J.

1107. AUTOMATIC QUILL POLISHER—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2304 N. 30th Street, Milwaukee 10, Wis.

1108. FABRICATION OF U. S. STAINLESS STEELS—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance tables for chemicals.—CARNEGIE - ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1109. PUMPS—Catalog B-131-1 describes complete line of horizontal and vertical centrifugal pumps for every water handling service.—PEERLESS PUMP DIV., Food Machinery Corp., Los Angeles 31, Calif.

1011. TEXTILE TRUCKS—Booklet describing doff boxes, frames and trucks, par-wrote, platforms, conditioning, steel lap, fiber, utility trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1111. BRUSHES—A 36-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1113. TEXTILE WRAPPER—Brochure describing automatic wrapping machine for wrapping various types of textile products. Illustrations of packages and all types of wrapping material.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1116. PERMACEL — "Industrial Tapes for the Textile Industry" is the title of a 4-page folder describing the uses of pressure sensitive tapes in the Textile Industry.—INDUSTRIAL TAPE CORP., New Brunswick, N. J.

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Please send me, without obligation, free booklets or further information on New Equipment items described in the October, 1950, issue of TEXTILE INDUSTRIES.

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Three-Carrier System Back in Use on Full-Fashioned Machines

Some full-fashioned knitters have just about completed another one-carrier, three-carrier cycle and are pretty well back on the three-carrier system again. These mills claim that they are running into such variations in diameter of multi-filament yarns, particularly in the 20 and 30 denier sizes, that they can no longer use the more economical, and generally more attractive, single-carrier system.

The three-carrier system has had an "in-a-while," "out-a-while" record about like a South American president. Back in the days of the first, full-fashioned, silk hosiery, the single-carrier system was the only one used. Silk varies considerably in diameter from point to point on a single filament, and as a result, light and dark rings showed up in dyeing. At that time, however, the ladies were happy to get silk hosiery even if it dyed green and yellow.

Later the three-carrier system was developed so that three separate yarns could be used in knitting. This tended to balance any fine or heavy yarns with two other ends, and the major cause of the rings was eliminated. Mills producing better quality full-fashioned hosiery continued to use the three-carrier system until well after nylon became the principle yarn for women's hose.

With man-made nylon as a yarn, most mills switched back to the single-carrier system, for it was felt that this simplification was justified with a yarn of uniform diameter. Until recently this proved true, but for the past few months, the knitters have noted rings again. Once again they have gone back to the use of three carriers and report that they have thereby reduced the number of seconds resulting from dye rings.

This return to the three-carrier system cuts considerably into production rates. One mill in North Carolina estimates that production is cut about 8%, and piecework rates have to be correspondingly increased. On the other hand, using their current supply of yarn, they can get no more than 70% first quality hose using the single-carrier system, while the three-carrier system reduces ring rejects to such an extent that they are able to get about 82% first quality. This means that the more complicated method, while cutting production, will pay for itself in first quality products.

Tests for Ginning Effects on Cotton Quality

Tests of 450 bales of cotton in the Mississippi Delta and in California, under different conditions, to determine the effect of various ginning practices on the quality of cotton fiber, have been recommended by the National Cotton Council's Industrywide Committee on Cotton Quality.

Five groups of tests will be run at three different periods, with 25 bales of cotton in each group; a total of 75 bales of cotton to be processed by each of the six gins. After the cotton has been ginned, spinning tests will be run in 18 mills; one mill for each group of 25 bales.

In processing each 25-bale group, five-bale lots will be ginned under varying conditions. In one case the ginning rate will be normal, with all overhead cleaning equipment and lint cleaners in use. A second test will be under the same conditions except the rate of ginning will be about twice normal. A third test will be at a normal rate and with lint cleaners but by-passing all overhead cleaning except the extractor feeder. The lint cleaner will be by-passed in a fourth test. The final test will be under the same conditions as the first except for drying, which will be excessive. These series of tests will be run three times by each gin.

HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

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SUPPLIERS' NEWS

WHAT THEY ARE DOING

William C. Howard has been assigned to the Atlanta, Ga., office of the **Taylor Instrument Co.** and will sell the firm's industrial line in parts of Tennessee, North Carolina, Virginia, Alabama, and Georgia. Benjamin W. Steverman, formerly industrial salesman in Cleveland, O., has been transferred to the Pittsburgh, Pa., office; and Charles H. Miller, whose headquarters were in Omaha, Neb., has left the company to go on active duty with the U. S. Marine Corps.

Alan J. Bronold has succeeded Allen Adams as sales manager for **Sterling Electric Motors, Inc.** Mr. Adams has retired from active sales

Mr. Bronold

management because of ill health, but continues as secretary-treasurer of the company.

At a recent meeting of the board of directors of **Saco-Lowell Shops,** Malcolm D. Shaffner and F. Robbins Lowe were elected vice-presidents. Both men will retain their positions as treasurer and southern agent, respectively, which they held prior to this election.

The **DuPont Company** is planning to enlarge its Martinsville, Va., plant by more than 100,000 square feet of floor space, in order to increase the size of the spinning, textile, inspection, and shipping areas.

Mell Daniel, vice-president of the Wadsworth & Woodman Division of **Interchemical Corp.,** has also been made president of the Standard Coated Products Division, following the resignation of Harry J. Hemingway. Harris S. Woodman, who is president of the Wadsworth & Woodman Division, has become divisional chairman of Standard.

Ivan E. Howard, hydraulics and lubrication engineer, has been appointed regional supervisor for the

Mr. Howard

Clark Equipment Co.'s industrial truck division in the south central territory. His headquarters will be in Peoria, Ill.

The **Medley Manufacturing Co.,** Columbus, Ga., has been purchased from Mrs. Wilson Williams, president, by L. H. Morrison, a manufacturer's agent, Burrell C. Cole, vice-president of Muscogee Motor Co., and W. T. Heard, president of Muscogee Motor Co. Mr. Morrison and Mr. Cole will serve as operating partners.

Draper Corp. has announced plans for expansion of its plant and warehouse at Spartanburg and East Spartanburg, S. C., respectively. It is expected that approximately $250,000 will be spent on these facilities.

M. W. Sledge, formerly assistant manager, has been made manager of the Belt Sales Department at **Good-**

Mr. Sledge

year Tire & Rubber Co., to succeed the late E. W. Stephens.

William A. Gray, Dresbach, Minn., formerly with the General Mills Co., and George A. T. Moore, Brockton, Mass., previously with the C. E. Chappell Store, Syracuse, N. Y., have been added to the industrial sales department staff of the **A. E. Staley Manu-**

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facturing Co. Mr. Gray will be located in the Chicago, Ill., office, and Mr. Moore will represent the firm in Minnesota, North and South Dakota, and Wyoming.

The **Durant Manufacturing Co.**, Milwaukee 1, Wis., has opened a southern branch office at Greenville, S. C., with Harold V. Barker as manager. A complete productimeter stock will be maintained there, as well as a repair service department.

M. C. Larson has been made manager of the Baltimore, Md., sales office of **Cutler-Hammer, Inc.**

Mr. Larson

J. V. Nelson has accepted the position of southern district manager of **Diehl Manufacturing Co.**, Somerville, N. J., and will make his headquarters in LaGrange, Ga. Mr. Nelson, who was superintendent of Avondale Mills, Alexander City, Ala., and more recently general manager of Dunson Mills, LaGrange, Ga., will represent Diehl on all of the company's textile products, such as motors, fans, grinders, etc.

Laurel Soap Manufacturing Co., Inc., Philadelphia, Pa., has appointed Albert H. Rant as New England sales and technical service representative.

Mr. Rant

The mechanical goods division of **United States Rubber Co.** has transferred its sales and technical service activities for printing materials from New York to Providence, R. I. It is expected that this move will bring about a closer coordination between sales and production.

W. H. Gibson has been appointed by **Emmons Loom Harness Co.** as representative in Texas, Oklahoma,

The adjustable handle makes it possible to scrub and wax polish in congested places where hand cleaning had been necessary before — around and under machines, counters, desks, lockers, etc.

Operator can raise or lower handle to any angle within an 80 degree arc and shove the Lawlor under any equipment where there is at least a 9½ inch opening and as far back as 4½ feet.

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ANOTHER POPULAR LAWLOR

The Model 20-D is designed for large areas. It does everything in one operation: deposits clean water over the soaped floor, a 19" revolving brush scrubs it thoroughly; then a rubber squeegee mops up the dirty water, which is vacuum pumped into a second tank. The Model 20-D is only 22" wide and can be used around machines and equipment. The nice thing is that one person can easily operate it.

MOP WRINGERS

Quality built of all steel with perforated rolls. Foot lever operation. Made for one or two pails.

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Made of heavy galvanized steel with welded seams. Two compartments, each with shut-off. Foot-pressure wringers. 30 or 60-gallon capacity.

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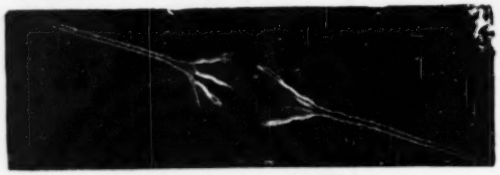

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and Arkansas. Mr. Gibson's headquarters will be at 1743 McKinley Avenue, San Antonio, Tex.

Parts for all Foster-Muschamp machines installed in this country will henceforth be stocked by **Foster Machine Co.** in Westfield, Mass., according to a recent announcement.

W. F. FitzGerald, formerly president of The Wool Bureau, is now

Mr. Fitzgerald

associated with **Commercial Factors Corp.**, assigned to the new business department, New England division.

The **Permutit Co. of** New York, N. Y., has acquired the ion exchange business and the trademark "Ionac" from **American Cyanamid Co.**, according to a recent announcement. Permutit's subsidiary, The American Zeolite Corp., will manufacture and distribute these materials.

Allis-Chalmers Manufacturing Co. has named Carl R. Froeba as sales representative in its Atlanta, Ga., district office. Mr. Froeba has been with the firm since 1948.

The **Buffalo Electro-Chemical Co., Inc.**, one of the first manufacturers in the country to make hydrogen peroxide electrolytically, is celebrating its twenty-fifth anniversary this year. C. A. Buerk, founder of the company, has been president since its incorporation in 1925.

L. C. Stowell Engineering Co., re-builders of tenter chains and guides, recently moved from Kannapolis, N. C., to new and larger quarters at Morris Field, Charlotte, N. C.

William M. Shine, formerly with the General Aniline & Film Corp., has joined the plastics department of

Mr. Shine

Arnold, Hoffman & Co., Inc., and will have his headquarters in their New York City office in the Empire State Building.

Dr. H. R. McCleary, who has for several years been studying physical chemical properties of dyes and dyeing, has been named sectional director, application research department, of the Calco Chemical Division of **American Cyanamid Co.**

Hooker Electrochemical Co. has announced the appointment of James S. Walker as supervisor of technical sales service in its sales development department. Joy E. Beanblossom has been named manager of development; James S. Sconce, manager of research, and Dr. Bruno H. Wojcik, assistant to the technical superintendent.

The Whitty Engineering Co. of Boston, Mass., has been appointed New England sales representative for the **Newport News (Va.) Shipbuilding**

This new FIDELITY Skein Reeler permits each operator to handle four or more machines . . . a control automatically shuts off each machine when the predetermined skein weight has been reached. Machine down time is reduced by from 50 to 90% and labor efficiency is correspondingly increased. Compact, modern design streamlines your plant and provides the answer to lower manufacturing costs to meet competition.

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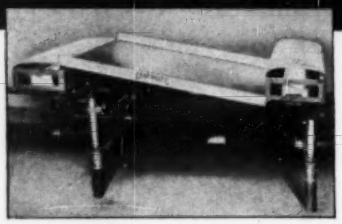

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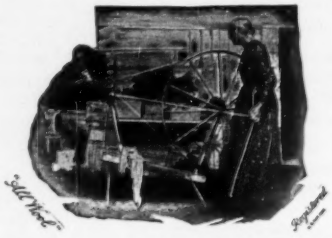

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"THE ROVING FRAME"
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Every carder, frame fixer, section man, and superintendent will find "The Roving Frame," by Fay H. Martin, an instructive pamphlet. Mr. Martin, who has long written articles for "Textile Industries," clearly interprets draft, twist, lay, tension, pressure of the presser, hyperbola curve, the winding of the bobbin, reverse twist on the roving frame, roving frame cones, tensions and compounds so that the student or practical man will profit by his explanation.

This is a reprint of 26 pages 8½ x 11 of a series of articles which were previously published in "Textile Industries," containing valuable information, illustrations, tables, charts and diagrams.

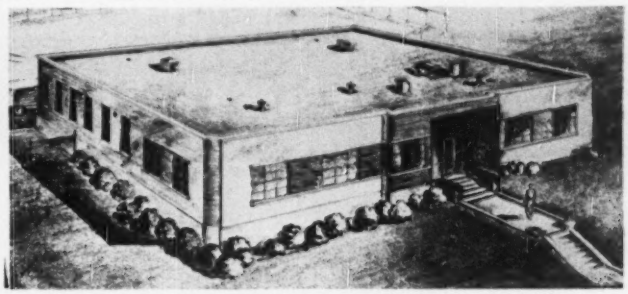
Fay H. Martin was a recognized authority on the roving frame. This book has been adopted by textile schools and vocational schools. May be secured in conjunction with a 3-year subscription to "Textile Industries" for $5.00 (Foreign, $11.00).

TEXTILE INDUSTRIES
806 Peachtree St., N.E. — Atlanta 5, Georgia

and Dry Dock Co., which has since the war produced with other items rayon machinery, wool cards, etc.

A Product Engineering department, with F. A. Teeple, Jr., as manager, has been formed by the **Atlantic Steel Co.** for the purpose of creating research and development services to broaden the productive capacity of southern industry and agriculture. Mr. Teeple has been with the firm since 1934 and has had considerable experience in the metals fabrication field.

Harold W. Ball, chief engineer at **Foster Machine Co.**, Westfield, Mass., served as vice-chairman of the annual meeting of the Textile Division of the American Society of Mechanical Engineers, which was held in Worcester, Mass., on September 20.



NEW PLANT FOR ABBOTT MACHINE COMPANY

A new plant in Greenville, S. C., 102′ x 90′ in size, has just been completed by the **Abbott Machine Co.** One third of the space will be used for an office; the remainder of the building will be set up as a shop for general repairs of Abbott winders and quillers as well as for experimental and research work. L. S. Ligon is manager.

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Manufacturers Agencies of Cotton Goods, Rayons and Ribbons, wanted for Ontario and Quebec (Canada), by energetic, well introduced representative. Please reply to Box No. 407, TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Ga.

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Executives, supervisors, office personnel, and operatives to register for positions in all branches of the textile industry. Correspondence confidential. Mill inquiries invited. National Textile Employment Service, General Delivery, Atlanta, Ga., Charlotte, N. C., Boston, Mass., Philadelphia, Pa.

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1 Barber Colman Portable Warp Tying machine — Model K. Write Box 390, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

POSITION WANTED as mill superintendent or overseer of weaving. If your organization can use an able, aggressive man with extensive and successful practical experience on most all types of cottons, prints to ply ducks, textile education, who has absolutely no fear of hard work, good manager of employees, sterling character and habits, I would very much appreciate hearing from you. References. Available for interview on short notice. Address "EFFICIENT," Textile Industries, 806 Peachtree St., N. E. Atlanta 5, Georgia.

WANTED

Assistant to eventually manage routing operations of dyeing and finishing service laboratory of rayon manufacturer. Degree and experience in dyeing and analytical chemistry preferred. Neatness and good personal habits, accuracy and aptitude for report writing essential. Salary and advancement commensurate with ability displayed. American Enka Corporation, Attention—General Industrial Relations Department, Enka, North Carolina.

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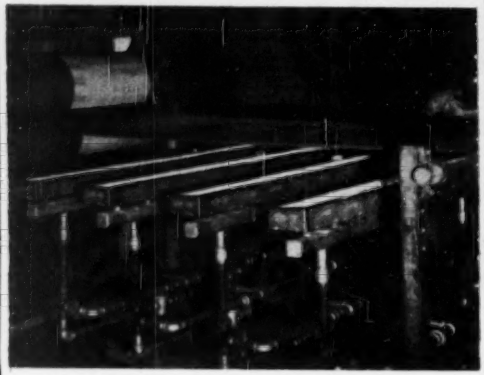

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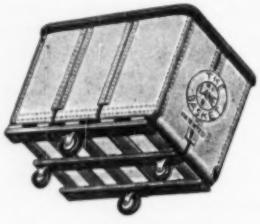

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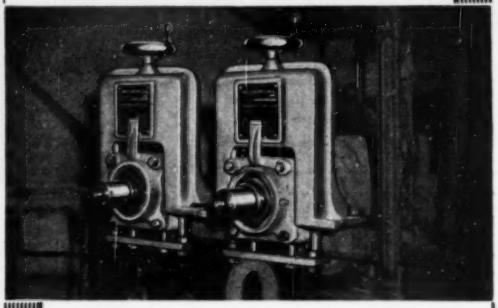

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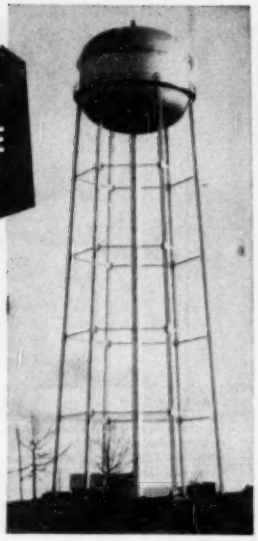

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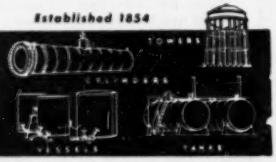

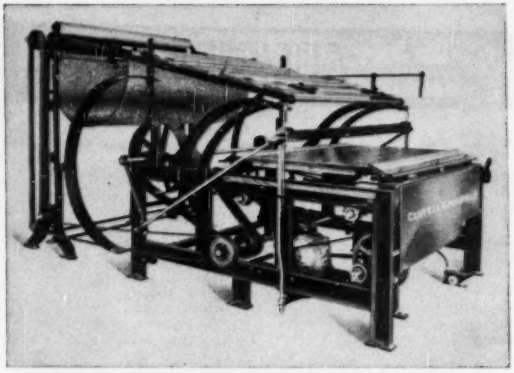

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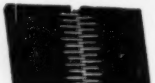

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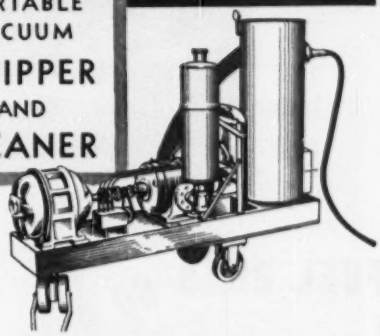

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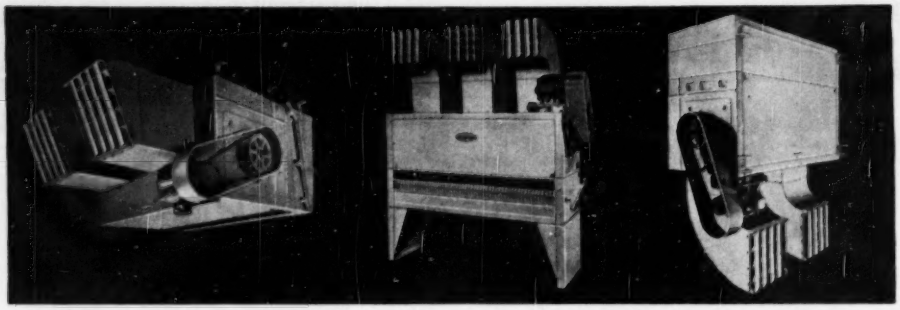

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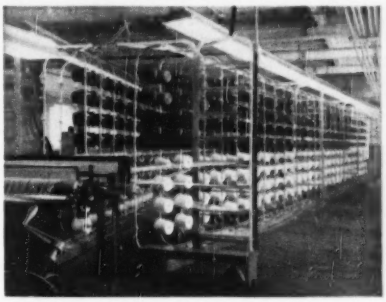
PROMINENT WOOLEN AND WORSTED MANUFACTURER

CUTS WARPING COSTS 30% WITH McBRIDE MAGAZINE CREEL



The new McBride SRM Magazine Creel shown here installed in a leading Pennsylvania woolen manufacturing plant has cut warping costs by 30%, more than doubled warping speeds and solved a number of production problems for the company.

THE OLD METHOD involved the use of small, forty end creels for the transfer of the yarn onto jack-spools. These jack-spools were placed in a creel and reeled onto the beaming frame, then in turn to the loom beam.

This method caused a number of additional problems, including the necessity for frequent end tying requiring time and leaving knots in the warp. The maximum speed obtainable was 80 to 150 yards per minute. Two to three hours were required for set-up of a new pattern – all lost time from a production viewpoint.

The use of different types and sizes of yarn packages was difficult and frequently involved an additional winding operation.

WITH THE NEW McBRIDE MAGAZINE CREEL a full run can be made without the necessity for end tying and with the very minimum of down time.

Speeds of from 250 to 400 yards per minute are regularly obtained and it is the belief of the superintendent that speeds over twice this could be consistently run with lighter yarns.

Pattern changes are now accomplished much more rapidly than formerly. The McBride magazine features permit a complete new pattern to be set up on the creel while the preceding pattern is being run.

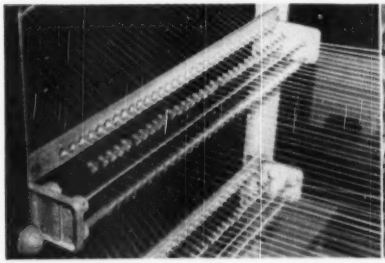
Special revolving spindle helps speed tying of transfer tail to new package.

PROBLEM:

- Cut cost.
- Increase warping speeds.
- Speed pattern changes.
- Eliminate down time.

SOLUTION:

- Warping costs cut 30%.
- Speed more than doubled.
- Pattern changes easier, faster.
- Down time practically eliminated.



1. New improved McBride electromagnetic stop motion stops warper instantly in case of yarn break. The two-way signal lights enclosed in a steel channel for maximum protection speed location of broken ends.

2. Note the adequate ballooning space, giving easy access to packages for the creeler.

3. Every McBride SRM Magazine Creel is engineered to fit the specific requirements of the yarn and the plant's physical layout. Numerous columns would have prevented erection of sufficiently large creel by conventional means.

COMPLETE ENGINEERING SERVICE IS PART OF EVERY McBRIDE INSTALLATION

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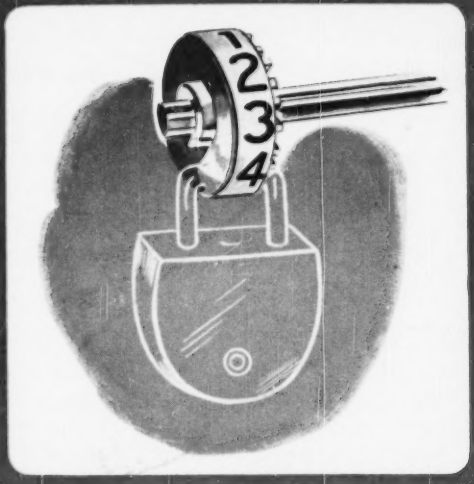

2. Locked Wheel:

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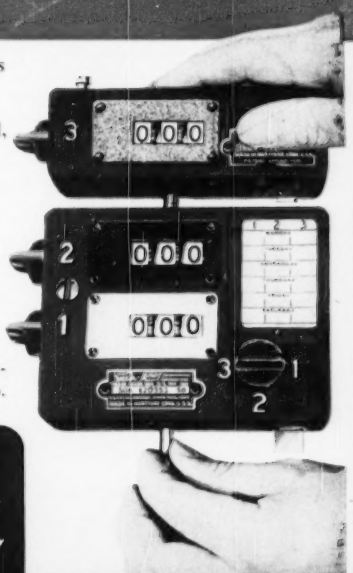

VEEDER-ROOT INCORPORATED

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